THE BUILDER
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From a sketch by MR. T. RAFFLES DAVISON, F.S.A.

MEETINGS

FRIDAY, *January* 20.

Institution of Civil Engineers. Mr. Conrad Gribble on "Impact Stresses in Bridges—Retrospect and Present-day Aspect." At the Grand Hotel, Sheffield. 7.30 p.m.

Institution of Electrical Engineers (West Wales (Swansea) Centre). Annual Dinner. At the Hotel Metropole, Swansea. 7.30 p.m.

Institute of Fuel Professor McMillan and Mr. A. Dawe on "Recent Fuel Developments." At the University College, Nottingham. 7.30 p.m.

London Society. Mr. T. Adams on "Replanning London's 'Built-up' Areas." 5 p.m.

Institution of Welding Engineers. Mr. J. G. Pearce on "Welding Cast Iron and Ferrous Alloys : some Metallurgical Considerations." At the Chamber of Commerce, New-street, Birmingham.

Institution of Engineers. Mr. S. Bylander on "Welded Steelwork Construction." At 39, Victoria-street, S.W.1. 7.30 p.m.

Institution of Mechanical Engineers. Discussion on "Can Engineers Reduce Unemployment?" Opened by Mr. T. S. Catmur. 7 p.m.

MONDAY, *January* 23.

Royal Institute of British Architects. Address to Students and Presentation of Medals and Prizes, 1933. By Sir Raymond Unwin, P.R.I.B.A. 9 p.m.

Royal Society of Arts. Mr. Ezer Griffiths on "Thermal Insulation." 8 p.m.

TUESDAY, *January* 24.

College of Estate Management. Mr. W. T. Creswell, Barrister-at-Law, on "Evidence in Arbitrations." 5.30 p.m.

WEDNESDAY, *January* 25.

Institution of Welding Engineers. Mr. A. G. Walker on "Essentials of Good Welding." At the College of Technology, Manchester. 7.30 p.m.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "Roman Architecture—II." 6 p.m.

National Federation of Building Trades Employers. Annual Dinner. At the Dorchester Hotel, Park-lane, W. 7.15 p.m.

Royal Society of Arts. Lieut.-Col. J. Benskin on "The Past, Present and Future Bridges of London." 8 p.m.

Shell-Mex House. Official Opening by the Rt. Hon. Walter Runciman. At 12.45 p.m.

Institution of Civil Engineers. Mr. P. W. E. Holloway on "The Work of the Foundations of Hampton Court Bridge." 6.30 p.m.

British Wood Preserving Association. Mr. Alex. H. Dewar on "Experiments in the Control of Dry Rot." At 29, Lincoln's Inn Fields, W.C.2. 6 p.m.

THURSDAY, *January* 26.

West Yorkshire Society of Architects. Mr. C. Sunderland on "Four Cities of Northern France." At Huddersfield. 7 p.m.

Institution of Structural Engineers. Mr. E. F. Power on "Stone Decay and its Remedies." 6.30 p.m.

Society of Antiquaries. Mr. G. S. Laird Clowes on "An Ancient Wreck in the Hamble River." 8.30 p.m.

Design and Industries Association. Mr. R. A. Duncan on "Designing for Industrial Production." At 6, Little Russell-street, W.C.1. 8.15 p.m.

FRIDAY, *January* 27.

L.C.C. Central School of Arts and Crafts. Mr. A. R. Powys on "General Principles in regard to the treatment of Ancient Buildings." 6 p.m.

Institution of Structural Engineers (Midland Counties Branch). Mr. H. E. Brooke-Bradley on "Bridge Foundations." At the Chamber of Commerce, Birmingham. 6.15 p.m.

Institution of Structural Engineers (Lancashire and Cheshire Branch). Annual Dinner. At the Midland Hotel, Manchester.

Institution of Civil Engineers. Mr. C. M. Roberts on "Lochaber Water Power Scheme : Second Stage, Laggan-Treig Tunnel." At the Institution of Engineers and Shipbuilders, Glasgow. 7.15 p.m.

SATURDAY, *January* 28.

Institution of Structural Engineers (Midland Counties Branch). Annual Dinner. At the Midland Hotel, New-street, Birmingham.

Institute of British Foundrymen (Scottish Branch). Mr. Mr. W. Y. Buchanan on "Sand Testing in the Foundry." At the Heriot-Watt College, Edinburgh. 4 p.m.

Scientific Society of the Royal Technical College. Mr. G. S. Barry on "Roadmaking and Road-making Equipment." At the Royal Technical College, Glasgow." 7.30 p.m.

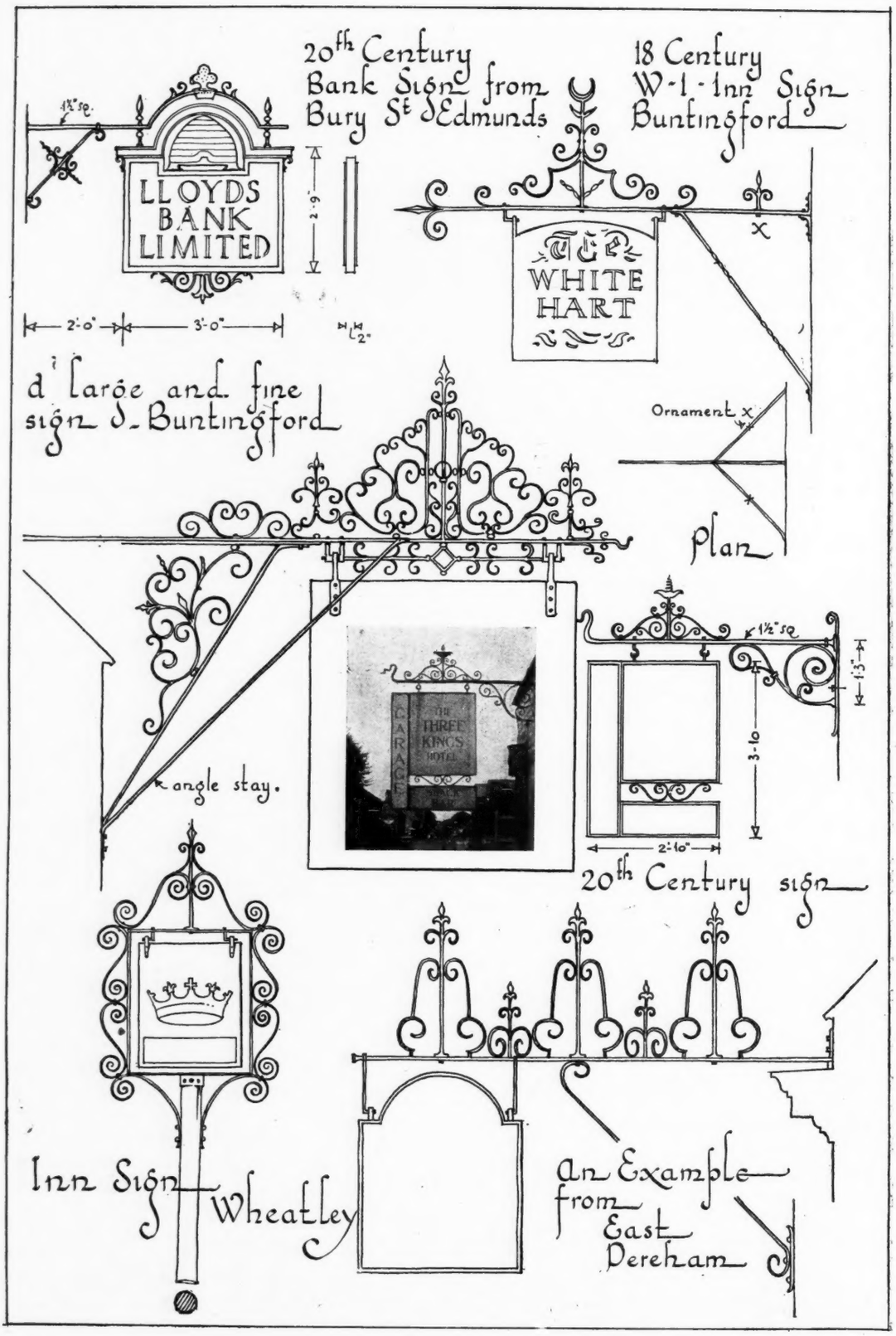
MONDAY, *January* 30.

Architectural Association. Mr. Howard Robertson on "The Training of the Architect." 8 p.m.

Royal Society of Arts. Mr. Ezer Griffiths on "Thermal Insulation." 8 p.m.

WEDNESDAY, *February* 1.

Conference for Architects on Electric Lighting. Discussion to be opened by Mr. C. Lovett Gill on "Domestic Lighting." At 2, Savoy Hill, W.C.2. 7 p.m.



English Detail—II : Outside Signs.

INDUSTRY AND EDUCATION*

NATIONS and individuals are judged alike by their economies. Many of us, had we the desirable surplus, could spend constructively; we could be benefactors in the best sense; the scope for wise expenditure is almost unlimited. It is in saving wisely that our judgment is taxed, once the needs of existence are met. Our cherished ideas of provision for our children's ultimate future are challenged by the need for prevision of their immediate development. It is sometimes unwise to save, since we cannot afford to be ill equipped.

Thus, in looking around post-war Europe, we find those countries that are most perplexed by the need for export trade are those who are willingly expending more than they did when they were better off; they must be efficient or perish. Not only education but art, too, has found its reward; it is no longer regarded as a rich man's perquisite; on the contrary, aptly applied, it is the key to popular favour. Products must look well, or they will drug an overstocked market. The Continental business man will not tell you (as his home equivalent is so much inclined to do) that the public prefers bad taste. Efficiency of hand and eye is a necessity for industrial well being, and, to obtain this higher standard, technical education must be equipped for modern needs. England depends on her export trade, which no internal consumption can replace; to maintain it she must pay for the best education and use it.

To this end the Board of Education sent two of their Inspectors to France, Belgium, Czechoslovakia and Holland, to study Trade Schools and ascertain how they are organised and adapted to their educational and industrial environment. The subsequent Report is not an official statement of policy; it is restricted to a description of the internal organisation and external relationships of those foreign schools, and, following a *résumé* of the English position, it concludes with general recommendations in the light of the experience gained. Our readers should study the Report, but we make no apology for sketching its outline here.

The elementary schools in England have a general leaving age of 14, rising in a large number of central schools to 15; subsequently we find a system of full-time vocational schools—Junior Technical Schools, Junior Commercial Schools, and Junior Art Departments. This involves a comparatively recent but great improvement in the organisation of technical education, and the initiation of a comprehensive scheme for bringing secondary education within the reach of every child of suitable qualities. These changes have added a year to the school life of the average child, and have lengthened by three or more years the education of 300,000 children. During the whole of the last century industry recruited her ranks from the elementary schools, supplemented by evening technical schools for the hardworking and ambitious. Now, however, the main stream has divided and, although drawn exactly from the same social source, it distinguishes between the selected children, admitted at about 11 years of age to selected schools with a higher leaving age, and those children not so selected who will form the rank and file of industry. The Report reminds us that this check to the vertical mobility of labour is a new phenomenon in England, and it seems probable that our provision of technical education, now so unlike that of other countries, will tend more and more to resemble it, where the rank and file is concerned. It is only recently that the Junior Technical Schools replaced post-elementary evening schools for the higher qualified child; on the Continent this double stream has been recognised much longer and technical training is directed to qualify the better educated for the more responsible posts. An aristocracy of ability is acknowledged, and the training is adapted to the different grades.

Leaving this double stream, we may say that in general comparison the Continental child is educated directly for commerce or industry in specified work, which ranks as part of his apprenticeship. The technical system is not under the Ministry of Education but of Commerce; school products are sold either in the open market or utilised by other State departments; the student is employed in highly equipped workshop methods; he enters the factory or shop to continue in the same occupation. In England the technical schools, whether whole- or part-time, remain under the Ministry of Education, and their function is more concerned with the principles underlying general practice than with complete mastery of one trade; manual dexterity is certainly stressed, but the equipment of these schools cannot approach the standard found in Continental countries. Workshop training is definitely left to the actual mill or shop. Bearing in mind that the technical schools giving whole-time instruction are largely interested in the higher-grade boy, the intention is to train the mind generally rather than the hand particularly. Besides the evening part-time schools for the ordinary post-elementary boys and girls, there are in London ten to twelve definite Trade Schools following the Continental lines of specialised work that ranks as apprenticeship. Recreation enters largely into all the schemes of English education, and the hours are not as long as those worked on the Continent, where a 38½-hour week is the minimum, but 54 hours is often reached. Except in Holland there are no half-holidays and no organised games.

Foreign Trade Schools for artistic industries all divide industrial design completely from fine art, but they are staffed by artists of distinction, not necessarily craft workers. In Czechoslovakia, training for trade design is highly organised and aims at being a pioneer in artistic movements. Except in furniture no traditional design is taught, since the craftsman is expected to initiate and not to copy.

In finance these schools curiously reflect local differences, although all are admirably supported. In France the *loi Astier* of 1919 compels every employer to release his young workers for certain hours to attend courses of instruction; it also imposes a *taxe d'apprentissage*. Exemption from this impost may be obtained only by a firm that gives appropriate training in its own works. In Belgium, the schools, which are magnificently equipped, are provided either by the State, local authorities, or the Church; the last takes an increasing share in the responsibility for technical teaching. On their controlling bodies there are represented both employers and employees, while the inspectors are largely drawn from industry to act for part of their time. In Holland the part played by private initiative is in marked contrast to Czechoslovakia, where all the schools are State supported. The Dutch State expects as a normal procedure that recognised governing bodies, having proved the need for a school, will proceed to establish it. State aid is dependent on municipal confirmation and representation. Direct State intervention is seldom evoked, as the Dutch are profoundly convinced that their economic existence depends upon efficient training. This zeal is no less active in Czechoslovakia, although State controlled and owned; the country is obsessed by a great corporate impulse to ensure the prosperity of its population.

In summing up, the Report insists that there is no call for radical change in English methods; the cadre is there and it is capable of vast extension or modification for the demands that industry may make upon it. What is vital to its usefulness is public and business interest. At present it is neither understood nor appreciated, and its scope is restricted accordingly. The framers emphasise that the system of works and training given concurrently with school education is the best preparation for industry, especially for the higher grades. Part time should be changed from evening to day work, in co-operation with the employer, and more definite trade schools should be started outside London as industry requires them. Better relationship between supply and demand of special workers is needed.

* "Trade Schools on the Continent." London. H.M. Stationery Office. 2s. net.

NOTES

Memorials in the Abbey.

If the object of the Dean of Westminster in addressing the Architectural Association on the monuments in Westminster Abbey was to elicit some professional support for the removal of some of the monuments, he will have met with a certain measure of success. Some of the monuments are undoubtedly a disfigurement and quite unworthy of their position, and there should be no question as to the desirability of their removal—not necessarily out of the Abbey altogether, but into some position where their cumbrous inanity would be less of an eyesore. There seems no reason why the Abbey should form a sort of museum illustrating the development of monumental sculpture. It is quite a question whether even memorials to distinguished people should be retained if they are a disfigurement.

Removal of Monuments.

It really seems that the reasonable thing would be to secure the removal of a considerable number of monuments from the Abbey which are unworthy of their position on account of the comparative obscurity or unimportance of the individuals commemorated; that should be the chief consideration, and there are a number of works to which such a process of elimination would fairly apply. We agree that a standard of artistic value could hardly be the deciding factor; but the unreasonable size of monuments which encroach on the space for seats should no doubt be taken into account. The present and future demands on the available space to commemorate adequately all who should be worthy of the honour of representation in a national shrine would seem to point in the future to the creation of a worthy annexe to the Abbey.

Tourlaville, Normandy.

From a drawing by Georges Bouet.

Building Over Railway Tracks.

Although nothing has been heard recently regarding the scheme advocated by Mr. Alfred C. Bossom, M.P. for Maidstone, for placing platforms over railway stations and tracks in London so as to provide additional building sites for flats, the question is by no means dead. Mr. Bossom, relying on his architectural experience in America, has provided many cogent reasons why it should not be impossible to provide a steel frame, with the stancheons fixed between the railway lines, carrying the necessary basis on which the flats may be erected. He lived himself, in New York, in a luxury flat over a railway, and states that he was in no way troubled with vibration or noise. But the investigations which have been taking place in London in order to discover whether the plan would be practical or not, reveal several difficulties which will have to be taken into account before the idea can be translated into fact. It is true that on one or two specially suitable sites certain railways are already building over the tracks. On the west of Finchley Road, close to the North London station, shops and flats have actually been erected over the track, and on the other side of the road a cutting leading to a tunnel is being covered in. But these isolated efforts are on a far more modest scale than the ambitious plans put forward by Mr. Bossom.

An Objection.

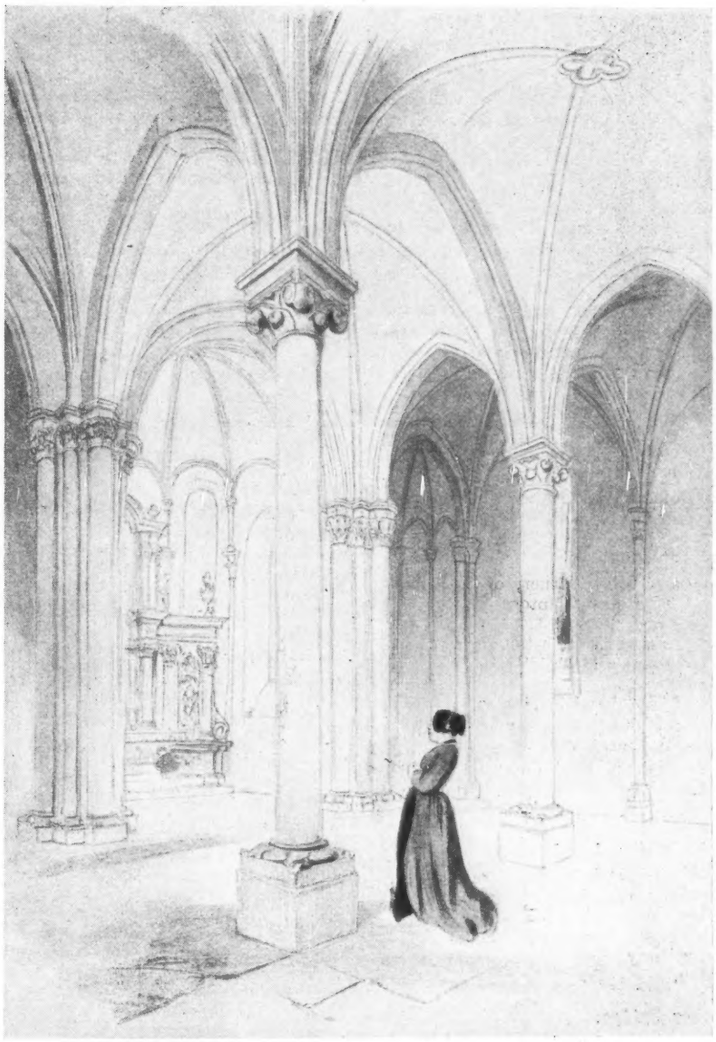
One of the most serious objections is offered from the railway point of view. An express railway train travelling at 40 or 50 miles an hour on the outskirts of London weighs several hundred tons, and if there should be an accident, and this weight moving rapidly should crash into one of the supporting pillars, there would, in the opinion of expert engineers, be a danger of a terrible catastrophe. Flats of five or six stories high might prove to be too heavy a weight for the remaining stancheons, and part of the roof might collapse on the railway track. This possibility has to be borne in mind, and therefore the framework would have to be sufficiently strong to resist any sudden strain. This would add considerably to the cost. An estimate has been made as to the probable cost of covering over an area on one of the London railways of 13 acres, and the total sum worked out at £5,000,000. If such an estimate proved to be accurate in other areas immediately the whole plan would be abandoned owing to the obvious financial impossibilities. Nevertheless, the idea, which at first sight is certainly attractive, is not being lightly cast aside. It is recognised, of course, that conditions in New York, which is built on rock, are far different to those prevailing in London. But even allowing for the different conditions, difficulties from the point of view of railway operating as well as of building, have still to be faced.

Trade with Ireland. THE General Election to be held in the Irish Free State on January 24 will be watched with considerable interest by those concerned with building materials on this side. While an "economic war" is less disastrous than the common sort, yet it is, by its nature, futile and harmful to both countries concerned. In the present instance Ireland certainly suffers far more heavily than England, but the imposition of tariffs on every variety of building material, including cement and steel, is, to put it mildly, a nuisance to our traders, and we sincerely hope that the Free State will decide at the election to revert to the friendly relationship that formerly existed between our two countries. Such a decision, while helping Ireland herself, would materially assist the trade revival that appears at last to have dawned in this country. From what we can gather of the prospects, we may look forward to a happy issue.

An Anomaly. IT is something of a problem at the Academy, when we study the purity of line and form and the charm of tone and colour in "The Little Archer," by the late Charles Sims, to understand how he could feel the necessity of painting No. 461, with its enigmatical title. Somehow we cannot place the mentality which produced this on a parallel with the distortion and coarseness which have marked with horror so much modern painting. Yet some of the influence which produced the one must have produced the other.

Recent Sculpture. WE should have liked to see a better concentration of the sculpture, at the present Academy Exhibition. Sir George Frampton, Sir Bertram Mackennal, Henry Poole and F. W. Pomeroy—these four sculptors had worthily reached Academy rank. Frampton, Poole and Pomeroy brought a feeling of delicacy and refinement into all they did, suggesting the influence of Italian art. Mackennal should always live by his fine equestrian statue of King Edward the Seventh, which should have found a worthy prominence within the Mall entrance; it is something far above the stereotyped work of its kind. The Lamia by Sir George Frampton and some of Pomeroy's figures in the Lecture Room are typical of the high quality which sculpture has reached in our time.

Traditional London. THE picture guide to London issued by the Medici Society is welcome, for the photographs by E. O. Hoppé are very vivid and in most cases have carefully chosen points of view. Rotten Row, St. James's Square, Fountain Court, King's Bench Walk and Soho Square are subjects in which the artist's special skill produces especially happy results. The descriptions should bring to mind the value of tradition. We are reminded, for example, that in London we may realise how "the value of tradition is so great that it supersedes the huge monetary value of building sites." Is this the case, or have we to admit that it is not so in the case of Carlton House-terrace?



The Church, Ste. Maure.

From a drawing by GEORGES BOUET.

The Burlington Gallery. ONE of the best exhibitions even for the Burlington Fine Arts Club is at present on view. The pictures, furniture and pottery all command attention. There is an exquisite little picture in tempera showing a triptych arrangement of the Virgin and Child in the centre with St. Michael and a mitred Bishop on either side, the figures being shown against a gold background. This is supposed to be the only example of Pacher in the British Isles, and was executed about 1465, fairly early in his career. In colour and beauty of detail this small work is rarely beautiful. It would not be easy to do justice in the space at our disposal to the variety and interest of the pictures now in this gallery. There is a perfectly charming Cotman, some fine portraits, a beautiful Tintoretto, a romantic landscape by Gainsborough, and a number of other admirable exhibits. A delightful little dancing figure in boxwood, some fine chairs and a number of beautiful bronzes are amongst the many treasures in the gallery. An especially fine French cabinet dated about 1550, said to have belonged to Diane de Poitiers, would alone repay a visit to this collection, which is a refreshment to one's thoughts after the sight of so much ill-designed modern work which claims attention.

The Camera Club. ONE of the best of the small current exhibitions is that of water colours by Mr. George W. Leech. These drawings are excellent in colour and delicacy, and the drawing is direct and unaffected. The studies of shipping are perhaps the most completely successful, but it is rare nowadays to find such all-round accomplishment as these drawings show. It is curious that so good an artist should have produced the design for the safety curtain for the Cambridge Theatre, for there is no lack of good decorative form in his pictures.

GENERAL NEWS

Architect's Estate.

Mr. Walter Roberts Watson, of Glasgow, architect, left estate valued at £14,784.

Proposed Institute for Boys, Bristol.

It is stated that Mr. A. C. Ballard, the Plymouth philanthropist, intends to build a boys' institute in Bristol similar to the institute at Plymouth.

Aged Workers' Houses, Willington.

The Willington U.D.C. has appointed Mr. D. McIntyre, of Durham, as architect for the 24 houses for aged workers proposed to be built on the Rosedale estate.

Cæsar's Camp, Wimbledon.

Cæsar's Camp, which forms a "natural annexe" to Wimbledon Common, is to be scheduled by the Commissioners of Works under the Ancient Monuments Act, and will thus be saved to the nation for all time.

Surveyors' Estates.

Mr. Albert Charles Turner, of Lavenham, Suffolk, late of Upper Clapton, E., surveyor left £75,996 (net personalty £49,571); and Mr. Robert Murray, of Edinburgh, retired surveyor (personal estate), £15,158.

Institution of Structural Engineers.

The annual dinner of this Institution will take place at the May Fair Hotel on Friday, March 17. The principal guest will be the First Commissioner of Works, Major the Rt. Hon. W. G. A. Ormsby-Gore, P.C., M.P.

Southampton's New Aerodrome.

Atlantic Park hostel, between Southampton and Eastleigh, has been bought by the Southampton Corporation for use as a municipal aerodrome. The park lies alongside the main railway line from Waterloo to Southampton.

New Humber Bridge.

The new scheme for the proposed Humber Bridge has been adopted by the Special Parliamentary Powers Committee of the Hull Corporation. The scheme becomes cheaper by the use of material from Sydney Harbour Bridge.

Cheap Houses.

The Oswestry R.D.C. have built what are believed to be the twelve cheapest rented houses in the country. They are erected in four parishes, at a cost of £3,500, and are let, at a weekly rental of 3s. plus rates, to agricultural workers.

Proposed Amusement Park, Southport.

A Ministry of Health inquiry has been held on a proposal to establish a bathing beach at Ainsdale, Southport. It is proposed to construct dressing accommodation, a pleasure lake, a promenade, and a café, at a cost of £30,500. Sketch plans have been prepared by Mr. A. E. Jackson, the borough engineer and surveyor.

New Hotel, Blackpool.

The Blackpool Town Council has decided to build the proposed new indoor baths, which are to cost £150,000, on part of the site chosen by the company concerned for the erection of a £1,000,000 hotel. The Harvey Consolidated Estates, Ltd., of London, are the owners of the site.

Cinema in Place of Church.

The church of St. Mary the Virgin, Charing Cross-road, W.C.1, is now closed, having been declared redundant by the Ecclesiastical Commissioners. The church was built in 1850, replacing another which had been successively a Greek church in the seventeenth century and a French Protestant church. A cinema is proposed on the site.

Waterloo Bridge.

We understand that an early decision upon Waterloo Bridge is likely to be announced shortly by the Government. There is reason to believe that this decision will be in the nature of a reply to the deputation from the L.C.C. which Mr. Baldwin received last November, and that the Government will inform the Council which of the three schemes they will sanction and how far they will be prepared to give support.

Ardenrun Hall.

A fire which broke out on Tuesday morning at Ardenrun Hall, Lingfield, destroyed the central portion of the building and was with difficulty prevented from spreading to the wings. An extensive scheme of interior decoration was being carried out by the owner, Captain Woolf Barnato, who had spent £25,000 on the work. Ardenrun Hall was one of the principal examples of the domestic work of the late Ernest Newton, A.R.A., P.-P.R.I.B.A.

Newcastle's New Hospital Scheme.

Plans for the co-ordination of Newcastle's numerous charities administered by the Corporation are under preparation by the Schools and Charities Committee. Allied with the general scheme of reorganisation is one for the provision of a modern hospital to accommodate the 40 aged people now housed in the Holy Jesus Hospital in City-road, which was built in 1682. The City Surveyor has been instructed to prepare a sketch plan of a new building, equipped with all modern appliances, and capable of accommodating in comfort the aged people who reside in the Holy Jesus Hospital.

Proposed Winter Gardens, Southsea.

A big scheme for the provision of winter gardens at Southsea, costing £250,000, has been placed before the City Council for approval. The plans have been prepared by Southsea Development Company, which has secured an extensive site by the purchase of a large block of properties in Southsea-terrace, facing Southsea Common and sea front. It is proposed to include in the scheme an indoor swimming pool, a super cinema to seat over 2,000 people, a ballroom, and an amusement park and café, with an extensive roof garden. The building will have a frontage of modern shops.

An old Doorway at Hawkeshead.

From a sketch by Mr. T. Raffles Davison, F.S.A.

COMPETITION NEWS

Façade to a Newspaper Office.

The Cornish Quarry Masters' Association, in order to promote the study of granite as a building material under modern conditions, invite architects, architects' assistants, and architectural students to submit designs in competition for a façade in grey Cornish granite.

The Council of the Architectural Association, at the request of the Cornish Quarry Masters' Association, have appointed Mr. A. B. Knapp-Fisher, F.R.I.B.A. (President of the Association), Mr. G. Grey Wornum, F.R.I.B.A. (Past President of the Association), and Mr. Howard Robertson, F.R.I.B.A., S.A.D.G. (Director and Principal of the Architectural Association School), to advise them on the conduct of the competition, and to act as their assessors. The Cornish Quarry Masters' Association will appoint two of their members as additional assessors. The award of the assessors will be accepted as final by the Cornish Quarry Masters' Association, and the latter will award a prize of £50 to the author or authors of the design placed first by the assessors.

The object of the competition is to encourage the study of the appropriate and economical use of British granite under modern conditions. The subject chosen is the design of a façade to a newspaper office.

The proprietors of an important provincial newspaper have decided to erect, in front of, and masking the building housing their printing plant, an office block having frontage to a main thoroughfare. The street elevation of the office block, which will be connected to the printing works by bridges at upper floor levels, is the subject of this competition.

The building consists of a main ground floor with a gallery-mezzanine and three stories above. The height of ground floor, including mezzanine-gallery, is 24 ft. floor to floor, the mezzanine being treated as a gallery giving on to the well of the central hall, which will occupy the whole of the frontage. The mezzanine gallery would not extend across the street façade, but would be round three sides of the hall. The ground floor will be taken as 12 in. above pavement level. There is no basement. Above this main floor would be three stories, 11 ft. 6 in. floor to floor, containing staff offices.

The character of the elevation should be interesting and individual, in sympathy with the material used, and advantage may be taken of the high ground floor to create a sense of dignity and fine scale. The length of the elevation between narrow alleyways giving access at either extremity to the printing plant at the rear is 45 ft.

No restriction is imposed as regards the style of architecture adopted for the design of the façade, but competitors are asked to study how best to utilise granite as a facing material or otherwise.

The design, report and envelope of each competitor is to be contained in one package, and to be sent in (carriage paid) to the Secretary of the Architectural Association, 34-36, Bedford-square, London, W.C.1, and endorsed "Design for Granite Façade." The final date for the reception of drawings will be Friday, March 24, at noon. If it is desired to submit alternative designs, they must be completely finished, accompanied by the requisite reports, and packed separately.

No queries will be answered regarding the competition, but competitors may obtain further technical information relating to the nature and working of granite which they may deem necessary on application to Mr. M. L. Wetherall, The Cornish Quarry Masters' Association, St. Stephen's House, Westminster, S.W.1.

Copies of the conditions may be obtained on application to the Secretary of the A.A., 34-36, Bedford-square, W.C.1.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Building Returns for 1932.

SIR,—Now that the cities are issuing the building returns for the past year, I suggest that these should be carefully scrutinised by all whom they concern, which, in the end, is the professional architect and the taxpayer. From a first glance it would appear that in one city at least, with a building turnover of £3,000,000, about half is done by official staffs. Assuming this to be a fair and just estimate, at 5 per cent. on one and a-half million this would give an income of about £500 a year to 150 architects. A private architect has to accept the responsibility of his work and the price thereof. There is little possibility of hiding the actual cost under normal and ordinary circumstances.

On the other hand—in the case of housing, at least—there appears to be no possibility of finding out the actual cost of the alleged £350 house, as carried out by the official architect. Every department of a town staff and a few Government departments are, or may be, involved in its erection, or the supervision of its erection: the architect for the planning and building contracts, the burgh engineer for its structural efficiency and drainage, the road surveyor for its roads, the water department for its water supply, the gas department for its gas mains, the electricity department for its cables, the city chamberlain for its rent collecting, the town clerk for legal business, the Ministry of Health for its accommodation and hygiene, and probably other departments of unknown name and obscurity. Who can say the cost of anything done by an official department?

In the course of conversation with an eminent civil engineer, the present writer was informed that the same manner of encroachments are being made into the private practice of engineering. The Ministry of Transport reports on roads and bridges for municipalities. If this information is accurate, then it is time that City and County Councils realised that they are elected by the local ratepayers to look after the interests and welfare of local ratepayers, and that local professional services should be allocated to local professional men. Any reasonable body of men must see the justice of this demand, and it is time that the two great central Institutes of Architecture and Engineering, with their huge membership, influence and wealth, took this matter up with the Parliamentary representatives of the people.

In the case of engineering, local engineers are much better qualified to survey and report on the condition of bridges than Government representatives from the central seats of government. There are scores of old stone bridges all over the country which should be surveyed, and such questions as the removal of vegetation, and trees dealt with, and repointing and packing of haunches and spandrils, which would add another 100 years to their life and usefulness. They will then be standing long after many reinforced concrete bridges are cracked and derelict.

If the above assumptions are correct, it is clear that Government control is not only wasteful, but is destroying the individual initiative and hindering the free development of our building arts. We have ourselves to blame if we cannot take steps to end the present muddle, which can be supported on the grounds neither of logic, economy nor reason. No country can prosper which denies employment to so many highly skilled, educated and real "live" men.

This will certainly be recorded in history as the age of the success of the mediocre. The mediocre always plays for safety, and in safety there is neither progress nor real life.

WILLIAM DAVIDSON.

Architects and Quantity Surveyors.

SIR,—"Architect" is to be congratulated on his effort to put quantities in proper perspective. With him, I believe more use would be made of independent quantity surveyors if charges were more in accordance with the real value of services rendered. "Architect" suggests 1 per cent. as a fair charge for average work. He does not say, however, whether this percentage would apply on P.C.s and provisionals, such as steelwork, heating and so on, which, as a general rule, the surveyor does not handle, beyond embodying the totals in his bills.

The quantities of the remaining trades are measured twice—once by the surveyor for tendering purposes, and again by the staff of the contractor. The latter survey is of necessity far more accurately done where a great many items are concerned. This fact is important, and is often overlooked when assessing the value of measuring quantities for estimates only.

Mr. Killick's letter makes the position clear so far as scale charges are concerned, but he does not justify those beyond remarking that they are considered commensurate with the status of the men concerned. I should think, however, that the building owner is more concerned with value for money than with status, real or imaginary.

Mr. Smith's letter seems to be devoted to the evil of lumping items together, and he gives some awful examples. It certainly would appear as if the "taker-off" was in a hurry, but then a good estimator would set that right if he had a copy of drawing. Your other correspondents certainly make the best of a bad job, but they are far from convincing.

EN AVANT.

SIR,—"Xavier," "Chartered Surveyor," "Suum Quisque," and Mr. A. H. Killick, secretary, the Chartered Surveyors' Institution, are, from the contents of their letters, in your issue of the 6th inst., mainly concerned with the matter of fees to be paid to quantity surveyors. The matter is interesting though not the subject matter of the debate. It would be still more interesting to learn how it came about that architects are entitled to consider the preparation of quantities on a profit-sharing basis with quantity surveyors. I raise the point because I believe this to be illegal under certain conditions, and payment made by the builder for quantities might be inferred as involving him in such transaction. Before the builder makes such a payment ought he not, to avoid being placed in an invidious position, to inquire whether everything is in order, in justice to himself, should any question arise? As a simile, taking a hypothetical case, would a builder be justified in making a payment, say, to a specialist, if he knew this contained a sum payable to the architect, or payment for anything from which the architect would derive benefit?

Mr. Killick should know that quantities are prepared by others than chartered quantity surveyors. Good, bad and indifferent quantities carry the usual fees, and payment is made by the builder in the usual way. So long as this is the case, we builders feel that we shall never get properly prepared bills of quantities from quantity surveyors on a profit-sharing basis with architects, nor, where it pertains, is it conceivable that quantity surveyors can turn out properly prepared quantities on this basis in competition with those others who receive full fees for bad and indifferent quantities.

We have not a liking for these quantities, as Mr. Sumner Smith would have one believe, for it involves us in expense and trouble and sometimes unpleasantness. Were we alive to our own interests we should prepare our own quantities or engage competent quantity surveyors to prepare them. I fear that unless there is a radical change in the near future in the preparation of bills of quantities such will, of necessity, become the practice. It is only fair to architects to say that private companies and corporate bodies are correspondingly responsible for this state of affairs.

BUILDER, MIDDLETON.

Wages in the Building Industry.

SIR,—Mr. Coppock's letter in your issue dated January 6 has been pertinently dealt with by your correspondent, but a criticism of Mr. Coppock's further remarks would have been valuable. Mr. Coppock tells us that on a £300 house the total labour unit is £100, but he ignores the fact that the other unit of £200, which I presume is spent on materials, is mainly the cost of production and manufacture, and consequently a labour cost. This may be put at, say, about 90 per cent. of the £200. Thus out of the £300 spent, labour takes £280 and not £100.

Secondly, Mr. Coppock tells us that the financier, on a 20-year payment basis, earns 5 per cent., so that he receives £15 a year interest, without regard to redemption. In 20 years he receives in interest £300, or 100 per cent. on his outlay; on the other hand, labour receives £100. This, again, is inaccurate; the financier does not receive £300. Mr. Coppock ignores the fact that the annual payment diminishes year by year as the capital is being repaid, although an equalisation of annual payments may be made.

Nor is it reasonable to compare the amounts received unless the period of time is the same for both. To compare the period occupied in building the house with a period of 20 years is absurd. If we allow three months for the building of the £300 house, then labour receives during that period £280 for its services, and the financier on the 5 per cent. basis receives £3 15s. as interest for the loan of the £300. For this £3 15s. the building industry has been provided with work to the value of £280, and some member of the community has been able to obtain a home. To talk of the "greed of the financier as being the main cause of present-day unemployment" has no relation to the facts.

K. L. M.

SIR,—Whilst there are some points that your correspondent raises in your issue of the 30th ult., with which one cannot agree, it must certainly be admitted by any independent and thoughtful reader that Mr. Coppock is also a victim of the complaint of "muddled thinking."

One knows that the society of which Mr. Coppock is secretary contains many industrious workers, who have saved from year to year whatever they could out of their income, and made their investments in mortgages in cottage property, housing bonds, or invested in building societies' shares, etc., which pay a rate of interest of £4 10s. or £5 per cent., and it is strange to find that such a one should be called a sheltered financier, because he is lucky enough to get five per cent. on his life's savings. One would further assert that the interest on such investment, especially in these hard times, or out-of-work days, is at once spent in commodities which make the wheels of industry work, equally with the direct wages earned by the workers for their weekly toil.

Does Mr. Coppock think that the money received by a financier in a larger way than the workers' small investments does not get distributed and spent in commodities? The financier, too, has his bad times; sometimes he lends on property which in course of years becomes dilapidated, with all its attendant expenses, law costs, street improvements, drainage, etc., and then eventually becomes a mortgagee in possession, receiving after collecting rent, paying rates, taxes, insurance, and what not, a balance very often much below the rate of interest he originally lent at. Or he has to sell the property for what he can get, and lose a good part of the mortgage money. I would add that 4½ and 5 per cent. was a ruling price many years ago (say, from 1895 to 1910, for instance), and with the cost of living going up the financier gets only his 5 per cent. now, whilst his living expenses are forty to forty-five per cent. above what they were when he lent the money. It might be mentioned also that the public authorities have to pay five per cent.

on their loans for large public works, so therefore the financier with five per cent. cannot be said to be much out.

One would like Mr. Coppock to tell us what industry he knows of that is running at less than five per cent. profit. Can he tell us what is the percentage of running expenses of a trade union after allowing the payments in benefits to the members? Do the running costs exceed 5 per cent. on the gross income of members' fees? It is certain that the costs far exceed this, and therefore one would like him to explain on what basis he estimates the interest that one should receive.

One could mention a lodge of a certain union that had an investment on mortgage which carried five per cent., but then that was before the War; but can Mr. Coppock assure us that the invested funds of a trade union are let out at less than this figure, as from his statements one would imagine that he would be disgusted to think that a union should claim such a percentage, and be, equally with the financier, guilty of extracting such a toll from the general public. The financier is the man who helps the wheels of industry to work—willing to finance a venture if he can see a safe investment and a reasonable return for his money. Only one nation has so far abolished the financier, confiscated his investments, and refused to pay him interest, and that is Russia, with the result one sees to-day. Are any of the funds of the trades unions invested in that country?

WORKER.

The R.A. Exhibition of the Works of Deceased Members.

SIR,—It seems a pity that the work of no architect has ever been included in the above exhibition, particularly as the only architect who had been President for many years died comparatively recently. Possibly it might not be too late to collect some of the drawings of Sir Aston Webb's works.

W. J. H. LEVERTON, F.R.I.B.A.

Municipalities and Foreign Materials.

SIR,—Too little attention, it seems to me, has been aroused by the decision of the Birmingham City Council that "no article or manufactured materials produced or manufactured in any place other than the British Isles, India, or British Dominions beyond the seas, should be supplied by a contractor without the authority of the committee concerned."

The importance of the step taken by Birmingham lies not so much in its immediate application as in its relation to a stricter trend of public policy to be noted to-day in many European countries, where it is now very difficult, and in some cases impossible, for a manufacturing subsidiary of a foreign company to obtain Government and municipal contracts. The question, in brief, which now arises is not whether Birmingham is going too far but rather whether she has gone far enough. Should our municipalities refuse contracts to companies which are not nationally controlled?

In Germany—as in Italy—definite difficulties are placed in the way of trading by non-German and non-Italian concerns respectively, and similar restrictions apply in many other countries. In Spain, for instance, special advantages are given to manufacturing concerns of which two-thirds of the board, with its chairman as managing director, are Spanish nationals and seventy-five per cent. of the capital is owned by Spaniards, and the attitude of the Irish Free State is similar in tendency.

GEO. G. MITCHESON.

Dilapidated House Property.

SIR,—We hear and read a great deal at the present time, and have done for some time past, of trade depression and the various steps which should be taken to remedy it. We think we have seen it stated that the trade to suffer most from unemployment is the building trade and its various allied branches. One has only to take a short walk through any ordinary district in London (and we suppose the same would apply to other large towns) and observe the dilapidated state of house property; and if, as is the case in most residential districts of London, the property is held under lease, it is pretty certain evidence that leaseholders generally are not carrying out the conditions of their leases.

We would suggest that lessors and ground landlords should take steps to see that the repairs and maintenance clause in the leases granted by them are adhered to; the jobbing building trade will then be busy for a very considerable time, and there is no doubt the improvement in trade would naturally spread. If this is carried out it will be no hardship on lessee landlords, as the conscientious ones maintain their properties in good repair now, and the defaulters are found mainly among the "profiteering" class.

A BUILDER.

Industrial Buildings: Is England Equipped for Prosperity?

SIR,—I venture to ask whether England is really equipped to reap her full share of the new prosperity which the prophets, including Lord Snowden, foreshadow. I ask in no churlish spirit; I ask only that my own faith may be strengthened.

I am told that very many of our factories date from the period between 1840 and 1870; that they are therefore not designed to allow the full play of what in the United States has come to be called "technocracy"; that the new and modern factories, enjoying most ample and well-lighted floor space and devised to allow efficient production and administration, definitely reduce costs; that in Lancashire, for example, only very few cotton mills have been built since the War; that the physical fabric and framework, so to speak, of a factory are beginning to be understood as vital in any up-to-date plans of competitive output.

I give the information just as I have received it. Can it be that Britain needs to be rebuilt industrially? And, if so, is not now the time to begin, when building costs are low?

S. MCPHERSON, Secretary,
The Institute of Quarrying.

Birmingham.

From a sketch by MR. T. RAFFLES DAVISON, F.S.A.

THE LEVERHULME SCHOLARSHIPS

IT is announced that these scholarships are intended to enable suitable British students of insufficient means to obtain a full training for the architectural profession in the Architectural Association School of Architecture. One scholarship of the value of £200 will be awarded each year, provided a candidate of sufficient merit presents himself, and will be tenable, subject to the general conduct of the student concerned and his or her progress being satisfactory, for one year, and may be renewed annually to cover a period of five years in all.

The scholarship will entitle the successful student to the following benefits:—

(1) Payment of the fees at the Architectural Association School of Architecture during the period of the scholarship.

(2) An annual allowance of £10 to cover subscriptions, working materials, etc.

(3) A maintenance allowance of £120 per annum, which will be paid in 12 equal monthly instalments, commencing on October 31 in each year, the last payment being made on July 1 of the year of the termination of the scholarship.

(4) During the fourth year an allowance of £20 will be made for travel, and during the fifth year an allowance of £40 for travel abroad. The programme for these travels must be submitted to and approved by the Principal of the School of Architecture.

The Association may terminate at any time any of the scholarships or withhold the maintenance or travel allowances if the scholar's work and conduct are not satisfactory to the Council. In the event of a scholarship or maintenance allowance being terminated before the end of the fifth-year course, the Council may transfer these benefits to another suitable student.

Candidates or their parents or guardians will be required to give evidence of means, and forms for this purpose, together with scholarship application forms, may be obtained from the Secretary of the Architectural Association.

The following permanent committee has been set up to deal with the award of the scholarship:—

President of the Architectural Association for the time being.
A representative of the Trustees of the Will of the First Viscount Leverhulme.
A representative of the Royal Institute of British Architects.
Two members of the Council of the Architectural Association.
Director of Education of the Architectural Association.
Mr. C. D. Medley.
Mr. F. R. Yerbury.

The committee will make their recommendations upon the results of an examination in the subjects to be selected, and also after a personal interview with the candidates. The candidates will also be required to satisfy the committee that they have reached a standard of general education equal to that required for admission to the Architectural Association Schools for students generally. They must not be below the age of 17 years on December 31 in the year of application for the scholarship.

Applications for the scholarships must be sent to reach the Secretary of the Architectural Association not later than June 1 in each year, after which due notice will be given of the date of the examination to be held later. The successful candidate will be admitted to the first-year course of the School at the commencement of the ensuing term in early October.

All communications on the subject must be made to the Secretary of the Architectural Association, 36, Bedford-square, W.C.1.

SANE MODERNISM—II.

By G. MAXWELL AYLWIN, F.R.I.B.A.

ARCHITECTURE AND BUILDING.

Many attempts have been made to define architecture, with success generally measured by their approach to a definition which supports the immediate argument of the definer. Possibly the simplest and most comprehensive is that of the modernist, who professes to see no difference of meaning between the terms "architecture" and "building." At times it seems very difficult to say otherwise than that all building is, or should be, architectural; and if one feels dissatisfied at such a sweeping of the pieces into one box, it may be well to remember that all the work of the architect, even of the skilful architect, is not necessarily architecture.

For let it be set down at once that the writer regards architecture not only as an art, but as the greatest and most profound of all the arts. And when this is granted, it is obvious that the motives and aspirations out of which architectural conceptions must grow will determine the type of building which can justly claim architectural quality. For does not the admission of all tasks of building into one general category depreciate the whole currency of art?

This line of thought explores the meaning of that "functional architecture" which is claimed as the inspiration of the modernists. The almost self-evident statement that function determines the form of a building is a generality which covers but thinly the essentials of the question; and the second, which deduces that the fulfilment of that function with the utmost efficiency must be architecture, is even less scanty in its covering capacity: it is a cold and unresponsive thought which becomes trivial when we think of the warmth and graciousness of fine architecture.

The approach must be along far more catholic lines to satisfy the aspirations of those who search for the outlet of art in building. The achievement is not in the task but in the motives governing the carrying out of the task.

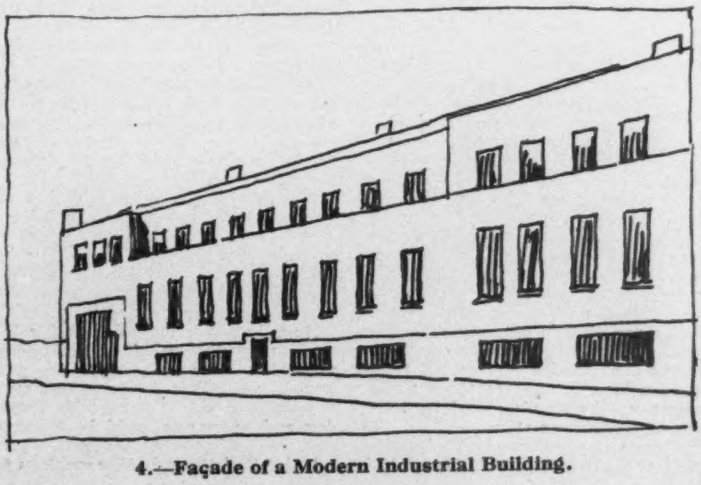
As usual, the comprehensive illustration can readily be found down the clear perspective of history. The mediæval cathedral builder set out to build a shelter for a congregation, roofed in stone, and providing a covered sanctuary and towers for bells and display. Who is content with the cold statement that he did his task efficiently and that therefore it was architecture? The whole value of the effort was that he set out to do this useful task in a grand and magnificent way, not merely to keep the congregation safe and dry, but to the glory of God and the art He put in him.

It is obvious, therefore, that building, regardless of size, must be divided into categories, though these must inevitably overlap in the fine shades of human motive. And the only category which can justly claim the architectural quality in its fullest meaning must be those instances where a building task is undertaken with the idea of expressing without stint the high import and meaning of the building, and of the purpose for which it is built. Efficiency and equipment are necessary parts of the task, but they are not themselves architecture, but merely the opportunity for architecture.

At the other end of the scale is the purely utilitarian building, put up for no other purpose than to be useful, to which orderly appearance and decency are but convenient accidents. In this class the factory presents the most obvious instance. Now it is obvious that the factory is exactly what is meant by functional building. It provides a number of floors, perhaps, designed to suit certain mechanical needs, and providing light and ventilation as required by the factory workers. As such, it assumes a more or less inevitable form, and by its structural system a certain inevitable rhythm of parts. And in many cases such an inevitable form and rhythm strike the eye pleasantly and offend no instinct for the beautiful. But to suggest that this is the exercise of high art is surely pretending too much. And still further to suggest that there is no more than this in any architectural exercise is to lower the whole tone of an artist's outlook.

The factory as it is conceived to-day is undoubtedly an efficient and highly skilled effort, far surpassing the nineteenth-century model. It is more seemly because it is conceived with a more thorough understanding of efficiency, and because by modern methods it can be made a more useful instrument. One judges it in terms of industry, and it gains full marks in the test, and would gain less if draped with all the architectural ornament of history. But in the streets and squares of our cities we feel the need for more expression than that of bare efficiency. We must represent the dignity of citizenship as well as the businesslike character of the citizen. Our churches must be more than meeting halls, and our town halls more than clerk factories. That is really the light and shade of architectural life which the extreme modernist seems to miss.

Between these two extremes comes a very mixed class of building in which the "utility" element predominates, but in which is felt still a need to add to this something of the higher things of life. The fifteenth-century labourer built himself a home for the health, comfort and safety of his family.



4.—Façade of a Modern Industrial Building.

5.—" . . . the warmth and graciousness of fine architecture."

He built it with sound craftsmanship along the natural lines which tradition handed to him. As often as not he added to this homely task a touch here and there which represented his contribution to things of the spirit, and in doing so, ruffled the surface of art.

Many of us attempt the same with our homes to-day, sometimes in the worst of taste, but generally with the best intentions. We do not claim by this means to practise the great art of architecture, but merely to observe the decencies and sense of building and to aim a little higher yet than just that. Functional architecture is, therefore, nothing but the common sense of building, and needs the finger of art to make it truly architectural when occasion justifies.

ARCHITECTS AND ELECTRIC LIGHTING

A series of conferences for the exchange of professional experience in lighting matters has been arranged by the Joint Lighting Committee of the Architectural Profession and the E.L.M.A. Lighting Service Bureau, of which the architect members are Messrs. A. B. Knapp-Fisher, L. H. Bucknell, C. Lovett Gill, G. Grey Wornum, Howard Robertson, and Percy J. Waldram. The meetings, which will follow the lines of the conference held last year, will be held every alternate Wednesday evening. They began last Wednesday, January 18, and will conclude on March 29. Lighting Principles; Domestic Lighting; Lighting of Commercial Buildings; Lighting of Schools; Floodlighting; and Lighting of Theatres and Cinemas are the subjects to be discussed. Each conference will begin at 7 p.m., with cold buffet from 6.15 p.m., and will be held at the Lighting Service Bureau, 2, Savoy-hill, W.C.2. The lectures are especially designed to be of service to architects, who should write for further particulars to the Bureau.

SHOULD THE ABBEY MONUMENTS BE REMOVED?

On Monday evening, at the Architectural Association, the Very Rev. W. Foxley Norris, C.V.O., etc., Dean of Westminster, gave an address on "Should the Monuments be Removed from Westminster Abbey?" Mr. A. B. Knapp-Fisher (President) was in the chair.

The preliminary business included a vote of condolence with the relatives of the late B. P. Collin. Another matter was the announcement of five scholarships each of £200 given under a bequest of the late Lord Leverhulme. (See page 124.)

Dr. Norris said that his connection with Westminster Abbey, directly and indirectly, was a great deal longer than might be supposed; for he had been conversant with things going on there ever since he could remember. About sixty years ago, when quite a small boy, he had been present at a discussion on the Abbey monuments. At that conference three schools of thought had been represented. There was one that might be described as being governed by the "Sweep 'em all out and get rid of the mason's yard" idea. This was a serious view held by serious people, and the present audience would be astonished if he divulged the names of eminent persons who held it to-day; but in all probability that view, or something like it, was held by a larger number of people than any other. A second school represented at the conference was one with which he found it extremely difficult to have any sympathy at all: this was the school that said that because a thing was *there*, that was a sufficient reason for its remaining. A third school held that it was due to the artists and sculptors who had placed their work in a certain position to preserve it *in situ*. Anyone who began to talk about the monuments in Westminster Abbey would find all those three schools of thought to-day. Interest in the question was aroused from time to time by the fact that the Abbey was as full as it ought to be, and that there was no room for further memorials of distinguished men. A Royal Commission had sat in 1890 to consider the question, and it would be a very good thing if those who discussed it now would read and study the blue book of that Royal Commission. It contained very interesting plans for a large annexe to the Abbey by distinguished architects of those days. Nothing had come of that proposal, partly because of cost. During the last seven or eight years, owing chiefly to the interest taken by people from other parts of the Empire, the question had been raised again and again. A prominent member of the late Government had taken it up with great keenness. There had been one or two little conferences, and one of the most famous of living architects had been asked to prepare sketch plans. Those designs were in existence; one was for a large cloister and annexe on the vacant space between the Chapter House and the House of Lords—the same space as had been considered in 1890.

The purposes to which such an addition might be put were various. It might be kept for the commemoration of future eminent persons, especially from the Dominions and Colonies, for whose commemoration there was no room in the Abbey; but, as had been pointed out by the Prime Minister, commemoration in an annexe was not the same thing as commemoration inside the Abbey. Or such an annexe might be utilised to some extent for the removal into it of a great number of monuments whose claim to a place in the Abbey was not convincing.

The question that ought to be considered was: What principles should guide those who were responsible for a large number of monuments in a church, and particularly Westminster Abbey? In this connection he wished to make it quite clear that there was no scheme on foot whatsoever at the present moment, either for an annexe or for the removal on any large scale of the monuments in Westminster Abbey. There was no scheme, and he would not be prepared to welcome a scheme for a large annexe unless the money was shown to be forthcoming. The scheme for an annexe had never been the Abbey's scheme; it had always been suggested from outside.

Since he had been Dean there had been two important inquiries The first committee had been a very important body, the present Prime Minister and all the ex-Prime Ministers now living being members. On the occasion of the second Inquiry, about six or seven years ago, the present Prime Minister and one or two of the ex-Prime Ministers had consented to be present, and amongst other people whose opinion was of value were Lord Crawford, the Provost of Eton, Archbishop Lord Davidson and the present Archbishop of Canterbury. At both conferences the whole question had been frankly and thoroughly discussed. On the first occasion he had said what he repeated now, that he would never be in favour of any large removal of monuments under present circumstances. He was perfectly well aware there were a great many monuments that ought never to have been in the Abbey. There had been a long period when for a small fee anyone could have a monument there. There were ugly things and memorials of insignificant people and events, but there was in the Abbey what was certainly unique in this country, if not unique in Europe and the world, a more or less complete category showing the gradual growth of taste in the matter of monumental memorials over the last 350 or 400 years.

There were three main principles by which the Abbey authorities should be guided. First, there was all the difference in the world between moving a monument from one place to another in the Abbey and removing it altogether or destroying it. He would never consent under any circumstances to one of the Abbey monuments being destroyed. He allowed there was much to be said in favour of removing some of the monuments to other public buildings, but he would be sorry if that were done because it would break the continuity of the collection.

As to the second principle, he asked how many monuments were in the Abbey that really deserved a permanent place there? There were certain great names which belonged to English history, such as Shakespeare, Livingstone, Kelvin, Lister and Gordon, but only a limited number of the names commemorated in the Abbey were so bound up with the fibre of English history as to merit a place there for ever. Some of the most eminent men, without whose names English history could never be written, were commemorated in the Abbey by no great monument but by a simple inscription on the floor or wall, while a large number of the monuments in the Abbey commemorated persons who no doubt merited some public recognition, but he suggested for consideration the question whether 100 or 150 years was not enough, and whether those monuments might not be now replaced by some more important commemoration.

It might come as a surprise to his hearers, but during the last twelve months he had moved five monuments—among others the seated life-size figure of Wordsworth, which he had removed to Poets' Corner. If a monument was put in by Parliament it could not be moved without the consent of the Department concerned; if it was put in by the family or by ordinary public subscription, it could not be moved without the consent of the family; in every case whole-hearted consent had been given to the removal.

A third point was this: sometimes when going round the Abbey a friend would ask why he did not get rid of a certain monument. But if there was an architect or sculptor in the company there was an instant protest that the monument was the work of some eminent sculptor, who had put it in its present position and that therefore it should be left alone. But which artist did the present audience consider had the greatest claim to consideration, the one who had designed and carried out the aisles and arcades or the sculptor who, in order to pose his masses in the light that he desired for them, had been allowed to play ruthless havoc with the architecture of the Abbey itself?

Besides the three principles enumerated, there was a fourth, which he did not propose for discussion. The governing factor in the Abbey or other church must always be the primary purpose for which the church existed—the worship of God. At the Abbey there was need of more accommodation for the congregations, and great inconvenience was felt that there was not room to walk in procession as a procession should walk. On that account there were great masses of sculpture which might have to be moved, and on that point he was not prepared to give way.

Sir George Duckworth, proposing a vote of thanks, said he agreed with the Dean on all the points he had put before the audience. As secretary of the Royal Commission on Historical Monuments, he (the speaker) would say that the consideration of whether a monument was beautiful or not was the last he would put before his Commissioners when considering the question of its retention. Even supposing a monument was in the worst taste and the execution inferior in material and design, he would retain it if it commemorated a person famous in English or Colonial history.

Mr. F. W. Troup said that on the question of the removal of monuments from Westminster Abbey, the considered opinion of the Society for the Protection of Ancient Buildings was that the monuments as they existed at present ought not on æsthetic grounds to be removed. Taste, like fashions, changed from generation to generation, and who could say that if the monuments were removed another generation might not want to replace them? The opinion he had given would not necessarily preclude the removal of monuments standing in the way of alteration, improvement or change of use of some parts of the Abbey, but he would deprecate any scheme put forward as an excuse for removal. It must be admitted that the Abbey was rather overcrowded. One more tablet might be erected, on which there should be the word *Finis*, and an announcement that monuments of a later date should be looked for in St. Paul's.

Mr. Edward Maufe said memorials were out of place in a small church, but the case of an abbey or cathedral was different. With regard to the future, if more space were needed a plan should be put forward with complete confidence.

Mr. G. Grey Wornum said that when the Dean spoke of a large new building extending from the east side of Poets' Corner towards the House of Lords, he had suggested that the great objection would be that it would not be felt that people being buried there were being honoured by burial in the Abbey, but that they were being buried in a secondary place. If the older monuments were themselves removed to the annexe, it would be a hallowed place where monuments of all ages could be seen, while people of to-day and to-morrow could be honoured by a small tablet in the Abbey itself.

Major Corlette and other speakers followed.

ROYAL INSTITUTE OF BRITISH ARCHITECTS

Following are some notes from the minutes of the Council meeting of the R.I.B.A. on December 5 last :—

R.I.B.A. Summer Examinations, 1932.—The Board of Architectural Education reported the results of the R.I.B.A. Summer Examinations, 1932.

R.I.B.A. Examinations Overseas.—The Board reported the results of the R.I.B.A. Final and Special Examinations held at Bombay in April, 1932.

Schools.—On the recommendation of the Board of Architectural Education the following decisions were made :—

(*a*) *School of Architecture, Glasgow:* That the recognition of the Degree Course and the Diploma Course for exemption from the R.I.B.A. Final Examination be continued; that the recognition of the Certificate Course for exemption from the R.I.B.A. Intermediate Examination be continued.

(*b*) *School of Architecture, University of Cambridge:* That the recognition of the three years' course (leading to the Final Examination in Architectural Studies for the B.A. degree at Cambridge University) for exemption from the R.I.B.A. Intermediate Examination be continued.

(*c*) *School of Architecture, The Polytechnic, Regent-street, London:* That the recognition of the three years' full-time day course for exemption from the R.I.B.A. Intermediate Examination be continued.

(*d*) *Armstrong College, Newcastle-upon-Tyne:* That the recognition of the three years' Diploma Course and the three years' Degree Course for exemption from the R.I.B.A. Intermediate Examination be continued; that the four years' part-time Certificate Course be recognised for exemption from the R.I.B.A. Intermediate Examination.

(*e*) *The School of Architecture, Edinburgh College of Art:* That the recognition of the Diploma Course for exemption from the R.I.B.A. Final Examination be continued; that the recognition of the Certificate Course for exemption from the R.I.B.A. Intermediate Examination be continued.

The Recognition of Australian Schools of Architecture for Exemption from the R.I.B.A. Examinations.—The Board reported that under the terms of the scheme agreed between the Royal Institute of British Architects and the Royal Australian Institute of Architects whereby the Royal Australian Institute of Architects act as the authority for architectural education and examinations in Australia, the School of Architecture of the University of Melbourne had been recognised for exemption from the R.I.B.A. Intermediate and Final Examinations; in addition to the School of Architecture of the University of Sydney which was recognised by the R.I.B.A. in 1925. The School of Architecture of the Sydney Technical College had been recognised for exemption from the R.I.B.A. Intermediate Examination.

Prizes.—(*a*) *The R.I.B.A. (Archibald Dawnay) Scholarship*, 1932-1933. The Board reported the following awards :—

(1) First Years of Scholarships : (a) An R.I.B.A. (Archibald Dawnay) Scholarship of £75 for the year 1932-1933 to Mr. A. W. Varcoe (Edinburgh College of Art); (b) An R.I.B.A. (Archibald Dawnay) Scholarship of £50 for the year 1932-1933 to Mr. M. G. Gilling (Liverpool School of Architecture);

(2) Second Years of Scholarships : (a) Mr. J. R. Baxter (Liverpool School of Architecture, University of Liverpool), who was awarded an R.I.B.A. (Archibald Dawnay) Scholarship of £75 for the year 1931-1932, a renewal of his scholarship for a second and final year; (b) Mr. D. L. Couves (Armstrong College School of Architecture, Newcastle-upon-Tyne), who was awarded an R.I.B.A. (Archibald Dawnay) Scholarship of £50 for the year 1931-1932, a renewal of his scholarship for a second and final year.

(*b*) *The R.I.B.A. Maintenance Scholarships in Architecture.*—The Board presented the following report of the Maintenance Scholarships Committee :—

(1) The Committee report that they have granted renewals of their scholarships for the year 1932-1933 to :—
  (a) Ralph Dickinson (£100) (School of Architecture, Birmingham);
  (b) M. G. Gilling (£100, Artists' General Benevolent Institution Maintenance Scholarship) (Liverpool School of Architecture).

(2) The Committee report that they have made the following awards :—
  (a) The R.I.B.A. Fourth and Fifth Year Maintenance Scholarship of £100 a year to A. M. Irvine, of the School of Architecture, Robert Gordon's Colleges, Aberdeen;
  (b) The R.I.B.A. Ordinary Maintenance Scholarship of £100 to E. F. Ward, of Northampton;
  (c) The Ralph Knott Memorial Maintenance Scholarship of £45, tenable at the Architectural Association School of Architecture, to R. L. Townsend.

(*c*) *Rome Scholarship in Architecture*, 1930 : Mr. W. G. Holford.—The Board reported that the Executive Committee of the British School at Rome had adopted the Faculty of Architecture's recommendation in favour of the extension of Mr. W. G. Holford's scholarship for a third year.

(*d*) *The Rome Scholarship in Architecture*, 1932.—The Board reported that the Rome Scholarship in Architecture, 1932, had been awarded to Mr. R. P. S. Hubbard, B.Arch., Liverpool School of Architecture.

(*e*) *R.I.B.A. Prizes at the Architectural Association School of Architecture.*—The Board reported the following awards :—

(i) The R.I.B.A. Henry Jarvis Studentship awarded to Mr. W. W. Fisk;
(ii) The R.I.B.A. Howard Colls Travelling Studentship awarded to Mr. Michael Pattrick.

(*f*) *Tour of R.I.B.A. Prizewinner.*—The Board reported that they had approved the work prepared on her tour by Miss Frances Barker, Owen Jones Student, 1930-1931.

(*g*) *The R.I.B.A. Prize for Art Schools and Technical Institutions with Facilities for the Instruction of Intending Architects* (*£5 in Books*).—The Board reported that the prize had been awarded to Miss Kathleen I. Maynard, of the Central School of Arts and Crafts, Plymouth.

Obituary.—On the proposition of the President an expression of the deep sympathy of the Council was conveyed to the relatives of the late Mr. J. T. Halliday, F.R.I.B.A., Past-President of the Manchester Society of Architects and Vice-Chairman of the Allied Societies' Conference. The President also referred to the death of Mrs. Walter Tapper, wife of Mr. Walter Tapper, A.R.A., Past-President, and on his proposition an expression of the sincere sympathy of the Council was conveyed to Mr. Walter Tapper and Mr. Michael Tapper.

Sir Arnold Thornely.—The hearty congratulations of the Council were sent to Sir Arnold Thornely, F.R.I.B.A., on the honour of knighthood conferred upon him.

Gift of Drawings by Georges Bouet.—The cordial thanks of the Council were sent to Mr. R. Fielding Dodd, F.R.I.B.A., for his generous gift of drawings by Georges Bouet.

The Architects' Unemployment Committee.—A special vote of thanks was passed to Mr. Percy W. Lovell for his services to the Architects' Unemployment Committee.

Membership of Committees.—Examinations Committee: On the recommendation of the Board, Mr. Edward Maufe, F.R.I.B.A., one of the two R.I.B.A. representatives on the Town Planning Joint Examination Board, was appointed to serve on the Examinations Committee. *Salaried Members Committee:* Mr. C. Bertram Parkes, L.R.I.B.A., was appointed to serve on the Salaried Members' Committee. *Slum Clearance Committee:* Mr. T. S. Barnes, A.R.I.B.A., was appointed to serve on the Slum Clearance Committee. *Social Committee:* Mr. S. E. Dykes Bower, A.R.I.B.A., was appointed to serve on the Social Committee.

Allied Societies' Conference.—Mr. W. F. Hedges, F.R.I.B.A., was appointed to serve as an additional member of the Allied Societies' Conference under the terms of By-law 81 (f).

Transfer to Retired Members' Class.—The following members were transferred to the Retired Members' Class :—As Retired Fellows : George Frederick Lake, Edward John May. As Retired Associate : John England Jefferson. As Retired Licentiates : Benjamin Sagar Dean, Samuel George Walker.

Resignations.—The following resignations were accepted with regret :—James Ransome, F.R.I.B.A.; John Arthur Carter Moffat, A.R.I.B.A.; William Auger Smith, L.R.I.B.A., John Russell Whitaker, L.R.I.B.A.

Election of Students.—The following Probationers were elected as Students of the R.I.B.A. :—Doris M. Bott (Liverpool Sch. of Arch.), T. A. Bull (Univ. of Sheffield), W. G. Dev (Edinburgh Coll. of Art), B. G. Duckett (Univ. of Manchester), G. C. Duke (A.A.), Christine A. Gale (Univ. of Cambridge), M. C. Gilling (Liverpool Sch. of Arch.), T. Hill (The Welsh Sch. of Arch.), G. A. Keighley (A.A.), G. H. Lawrence (Edinburgh Coll. of Art), A. R. Meadley (A.A.), R. H. Ouzman (Northern Poly.), M. H. Raza (Bombay Sch. of Arch.), W. H. Robertson (special exemption), P. H. D. Ronaldson (Edinburgh Coll. of Art), J. C. Simpson (Inter. Exam.), J. C. Smyth (Univ. of London), N. O. Wragge (Univ. of Manchester).

Dwellings for the Aged Poor, Margaret Creighton Gardens, Carlisle : Bungalows.

MR. PERCY DALTON, A.R.I.B.A., A.M.Inst.C.E., City Engineer and Surveyor.

ILLUSTRATIONS

PLATES

The "Tite" and "Grissell" Prizes.

We illustrate this week the winning designs for the Tite Prize and the Grissell Gold Medal—the former by Mr. Alan Reiach, of the School of Architecture, Edinburgh College of Art (motto, "Firenze"), and the latter by Mr. Robert Ashton, of the Architectural Association (motto, "Frank"). A report of Mr. Chelton Bradshaw's criticism of the R.I.B.A. prizes and studentships was given in our last issue.

The "Gaumont Palace," Lewisham.

The main front of this new cinema, in Loampit Vale, is faced with cream-coloured slabs of marble terrazzo, enlivened by horizontal projecting bands of blue and gold mosaic. The lower part is in polished black terrazzo, and this material is also used in the two columns supporting the lintel over the large window of the café. The canopy or marquise over the entrance is illuminated at night, and there is "Neon" lighting on the upper part. Advantage has been taken of the bold horizontal treatment of the front to provide facilities by illuminated lettering for informing the public of the entertainment provided, without the use of the large posters which seemed at one time to be an indispensable part of a cinema theatre, but which are now being gradually discarded.

The two elevations to Molesworth and Rennell-streets are treated on broad lines. The warm, pleasant texture of the large brick surface is relieved by tall windows, which convey to the observer the impression of the spacious hall within.

Entering the theatre from Loampit Vale, the patron passes through the vestibule into the large entrance hall. The walls and two rows of detached piers are covered in polished macassar wood and walnut, the dark richness of the former being relieved by bright green lines. The floor is in terrazzo divided by black marble and brightly coloured mosaic bands. A striking feature of the hall is the manner in which the lighting has been incorporated in the design of the ceiling and piers. On each side of the hall are the queueing spaces of patrons waiting admission, and an ingenious electrical sign above the stairs on each side shows at a glance the accommodation available. A broad flight of stairs immediately facing the entrance leads direct to the circle and café restaurant, and on each side of the stairs are the entrances to the stalls.

Passing into the ground floor of the theatre from the entrance hall the visitor enters an open corridor at the back of the seats, from which access is gained to the centre of the house. At each end of the back corridor two unusual features have been introduced into the plan, in consequence of the very great width of the theatre. These are two circular crush rooms or rotundas, where patrons may wait in comfort for seats likely to be available on the sides.

Three thousand three hundred patrons can be seated in the theatre—one thousand three hundred in the circle, and two thousand on the ground floor, and every seat gives the maximum of comfort and a perfect view of the whole of the stage. At the front of the building on the first floor is the café restaurant, an apartment measuring 70 ft. long by 36 ft. wide, and seating 200 persons. The decorations here are in green with light relief of silver and orange. A spacious and well-equipped kitchen adjoins the restaurant.

On the landing of the main staircase, which is between the restaurant and the entrance to the circle corridor, the eye is attracted by the two painted panels by Mr. Frank Barnes, representing in modernist manner "The Cinema Show" and "The Cinema Show in the Making."

The stage measures 85 ft. in width and is 36 ft. deep behind the fire curtain. The "grid" is 75 ft. above the stage floor, and enables every piece of scenery to be "flown" out of sight. As it is intended that the theatre shall present any kind of entertainment that may be desired, all modern stage appliances have been installed.

The heating and ventilating plant is installed in the part of the building fronting on Molesworth-street. Three large oil-burning boilers give the necessary warmth for the whole building, and huge fans draw in the outside air and force it through the filters, washed and conditioned before it is delivered to all parts of the building. A constant flow of air is maintained by the exhaust fans above the roof.

The steel construction throughout is in accordance with L.C.C. regulations applying to steel frame buildings, and was carried out and designed under the supervision of the architect by Messrs. H. Young and Co., Ltd.

The general contractors are Messrs. McLaughlin and Harvey, Ltd., and the following firms were associated in the work:—H. Young and Co., Ltd., steelwork; J. Jeffreys and Co., heating and ventilating; Jenson and Co., organ console lift and curtain control; Bulman Jupiter Screen Co., Ltd., perforated screen; Troughton and Young, Ltd., electrical engineers; Knight and Co., Ltd., fire curtain; Clark and Fenn, Ltd., plasterwork and decoration and metal bracketing; Imperial Lighting Co., electric signs; Strand Electric and Engineering Co., Ltd., stage lighting equipment; Frank Burkitt, Ltd., stage and operating box lights; F. H. Pride, electric light fittings, etc.; the Lawford Asphalte Co., Ltd., asphalt; Garton and Thorne, Ltd., canopies; Alfred Manchester, general haulage; the John Compton Organ Co., Gaumont super organ; W. W. Turner, Ltd., theatre seats; Claude-General Neon Lights, Ltd., "Neon" signs; W. H. Earley, plumbing and cast-iron drainage, etc.; A. E. Davis, ironmongery; William Boyer and Sons, Ltd., sand and ballast; London Electric Wire Co. and Smiths, Ltd., Lewcos cables; Edison Swan Electric Co., Ltd., electric lamps; Kingsmill Metal Co., Ltd., chromium handrailing on all stairways, wrought-iron and chromium-plated balustrading on main staircase, queueing balustrading, crush barriers, balcony balustrading, wrought-iron dividing panels, together with the ornamental grilles on landing on the main stairs.

Mr. W. E. Trent, F.R.I.B.A., is the chief architect of the Corporation.

Dwellings for Aged People, Carlisle.

A scheme for the provision of suitable accommodation for the aged people of the city has been for a long time under consideration by the Corporation, and it is generally felt that in the dwellings now completed at Margaret Creighton Gardens the solution to the problem has been found. The site on which the dwellings stand was formerly an island of condemned slum property, with allotments at the rear, covering in all an area of 3¼ acres. The land was acquired for the sum of £1,100, and the scheme was begun in March, 1932.

The number of dwellings provided in all is 64. There are eight bungalows and the remaining dwellings are in two-storied blocks of twelve and eight. The blocks are grouped around a rectangular grass courtyard, having a block of eight dwellings with bath annexes at the head, the sides being flanked by four blocks of twelve, and the courtyard being entered by a tree-lined avenue, along the sides of which the bungalows are ranged. This avenue is 40 ft. wide, and the courtyard measures 415 ft. by 140 ft. The roads, front and back paths are all constructed of concrete. There is a connecting back path 6 ft. wide, which runs the whole length of the blocks.

A brick wall, 4 ft. high, with the requisite number of gates, and surmounted by trellis work, extends from gable to gable of each block, effectively screening the back areas, which are intended to be devoted to flower and vegetable cultivation by the tenants. The area of each house is 369 super feet, and the accommodation consists of: Living room, 13 ft. 9 in. x 10 ft.; bedroom, 12 ft. x 9 ft.; scullery, 7 ft. x 7 ft.; larder, coals, and w.c. All the rooms are lighted by electricity. The living room is fitted with a fixed dresser and with a small "Tweenie" Interoven type range, and hot water is supplied by the "Rolyat" patent boiler system to a deep glazed sink in the scullery. The bedroom is fitted with a fixed wardrobe. Gas is laid on for cooking if required.

All the blocks are tiled with English tiles, and part of the elevations are half-timbered. The upper floor, in each case of the two-storied types, is of "Hy-Rib" concrete construction, and wooden flooring to deaden sound and minimise danger in case of fire. There are two bath annexes—one for the use of male and the other for female tenants. Each annexe has three baths, and can be entered also from the adjoining dwelling, the tenant of which acts as caretaker in each case.

The average cost per dwelling is £176 10s., and the cost for roads, footways, fences, sewers, etc., £18 18s. 6d. per dwelling, making a total per dwelling of £195 8s. 6d., including the cost of the bath annexes. The rent has been fixed at 4s. per dwelling, inclusive of rates and water charges. An all-in charge of 4d. per week is made for electricity. The entire cost of the 64 dwellings is £11,295 17s. 8d., and the cost of the roads, footways and grass court is £1,211 6s. 3d., making a complete total of £12,507 3s. 11d.

The dwellings have been named after the late Mrs. Archibald Creighton, who took an active interest during her lifetime in the social welfare of the city.

The contractors for the houses and roads entire are Messrs. John Laing and Son, Ltd., of Carlisle.

Mr. Percy Dalton, A.R.I.B.A., M.Inst.C.E., City Engineer and Surveyor, is the architect.

OBITUARY

E. A. Whipham.

We regret to record the death in London, of Mr. Edward Arthur Whipham, A.R.I.B.A., aged 62.

A. E. Collin.

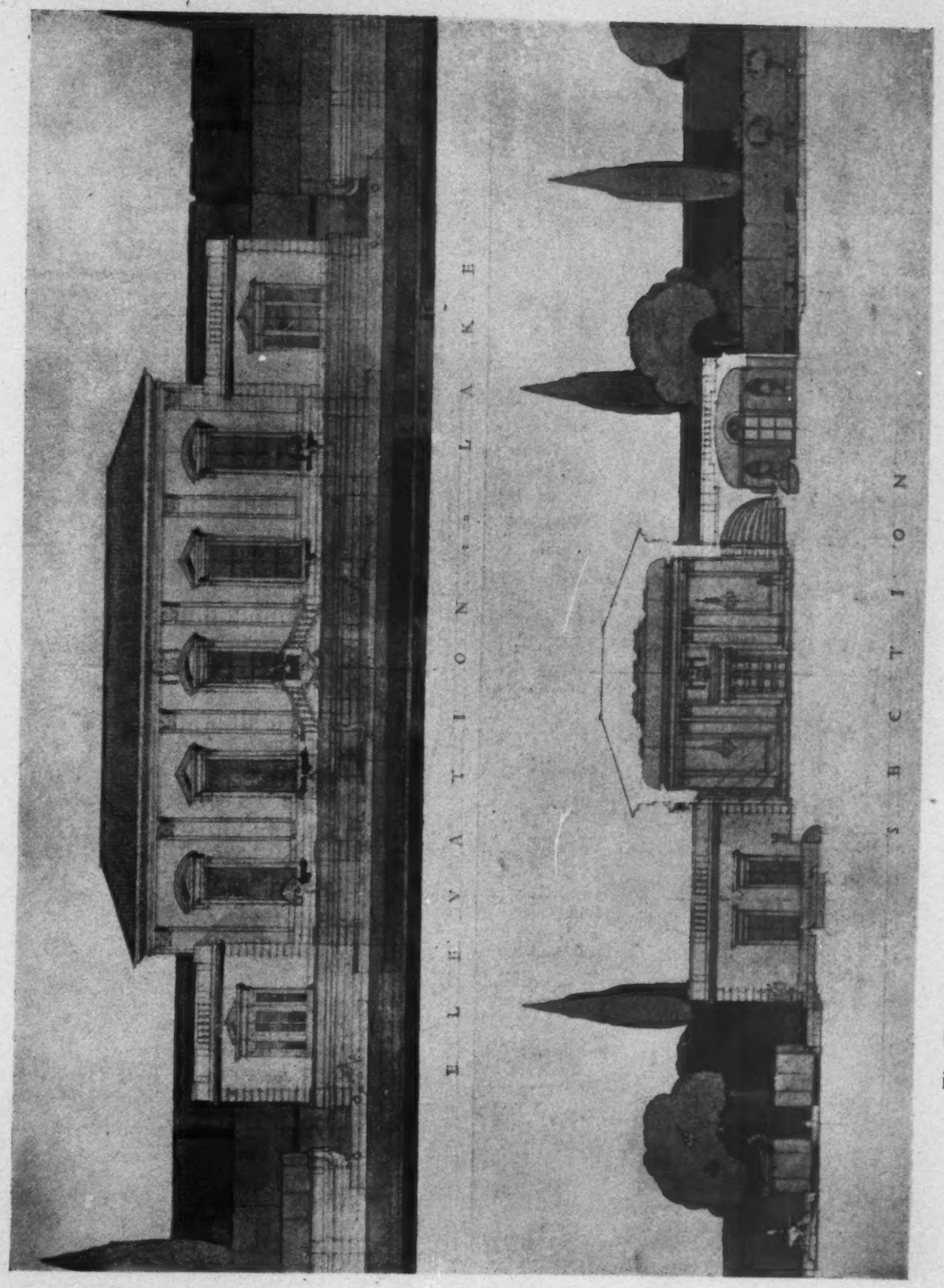
We regret to record the death of Mr. Arthur Ellison Collin, who had been, until his retirement, for thirty years city engineer of Norwich, and before that borough engineer and surveyor of Reading.

John Murray, F.R.I.B.A.

The death has taken place at his residence in Streatham of Mr. John Murray, F.R.I.B.A. Mr. Murray was born in Glasgow 71 years ago, and was educated at Albany Academy. As a young architect, Mr. Murray was associated with Sir Rowand Anderson in the construction of the Central Station Hotel. He designed the Wallace Memorial at Elderslie; the St. Andrew's Presbyterian Church, Blacklock, Dublin; and Bromley Presbyterian Church. One of his most recent commissions was to design the Straits Chinese Presbyterian Church, Singapore.

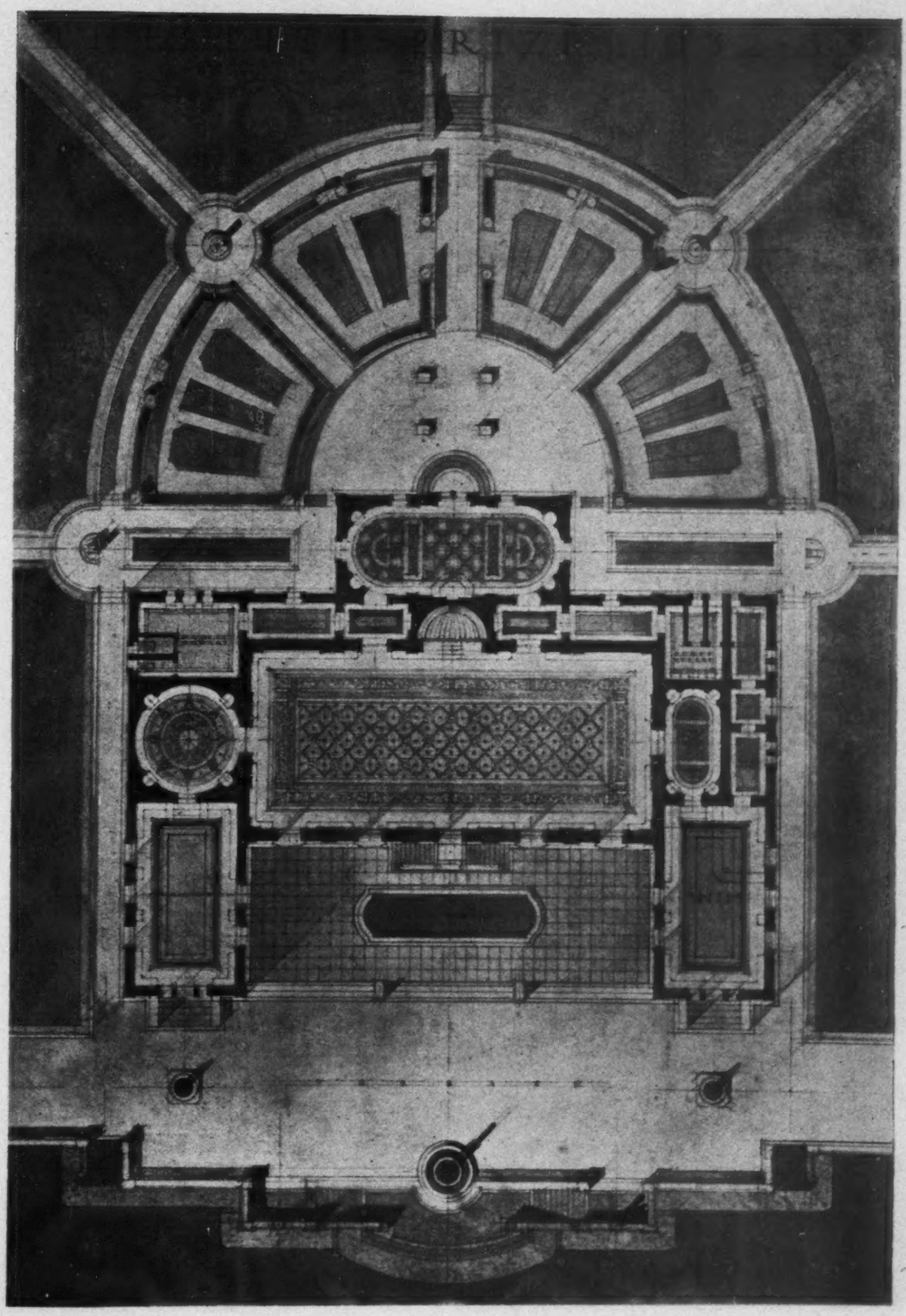
Edwin Darby.

We regret to record the death at Brighton, after a brief illness, of Mr. Edwin Darby, founder of the well-known firm of manufacturers of gas-heated water appliances known as the "Hurry" Water Heater Company, of Broad-street, Birmingham. Born in 1866, the greater part of his life had been spent in the service of the gas industry, and his matured wisdom and wise counsel will be greatly missed. Not only was he fired with enthusiasm and an untiring zeal for the development of his side of the industry, but he had the happy knack of inspiring enthusiasm and zeal in others. Of a retiring disposition, he never sought the limelight for himself, and the satisfactory solution of a difficult problem or the achievement of a coveted objective were more to him than material gain. He ever took a kindly interest in the welfare of his workpeople, by whom he was held in affectionate esteem, and he endeared himself to all who came into close contact with him.



The Tite Prize. "A Ball Room in the Grounds of an Italian Embassy": Winning Design.

By Mr. Alan Reiach (School of Architecture, Edinburgh College of Art).



The Tite Prize. "A Ball Room in the Grounds of an Italian Embassy" : Winning Design.

By Mr. Alan Reiach (School of Architecture, Edinburgh College of Art).

Photo: Bedford Lemere.

The "Gaumont Palace," Lewisham: Auditorium, from Balcony.
Mr. W. E. Trent, F.R.I.B.A., Architect.

Photos: Bedford Lemere.

SIDE ELEVATION.

ENTRANCE FRONT.

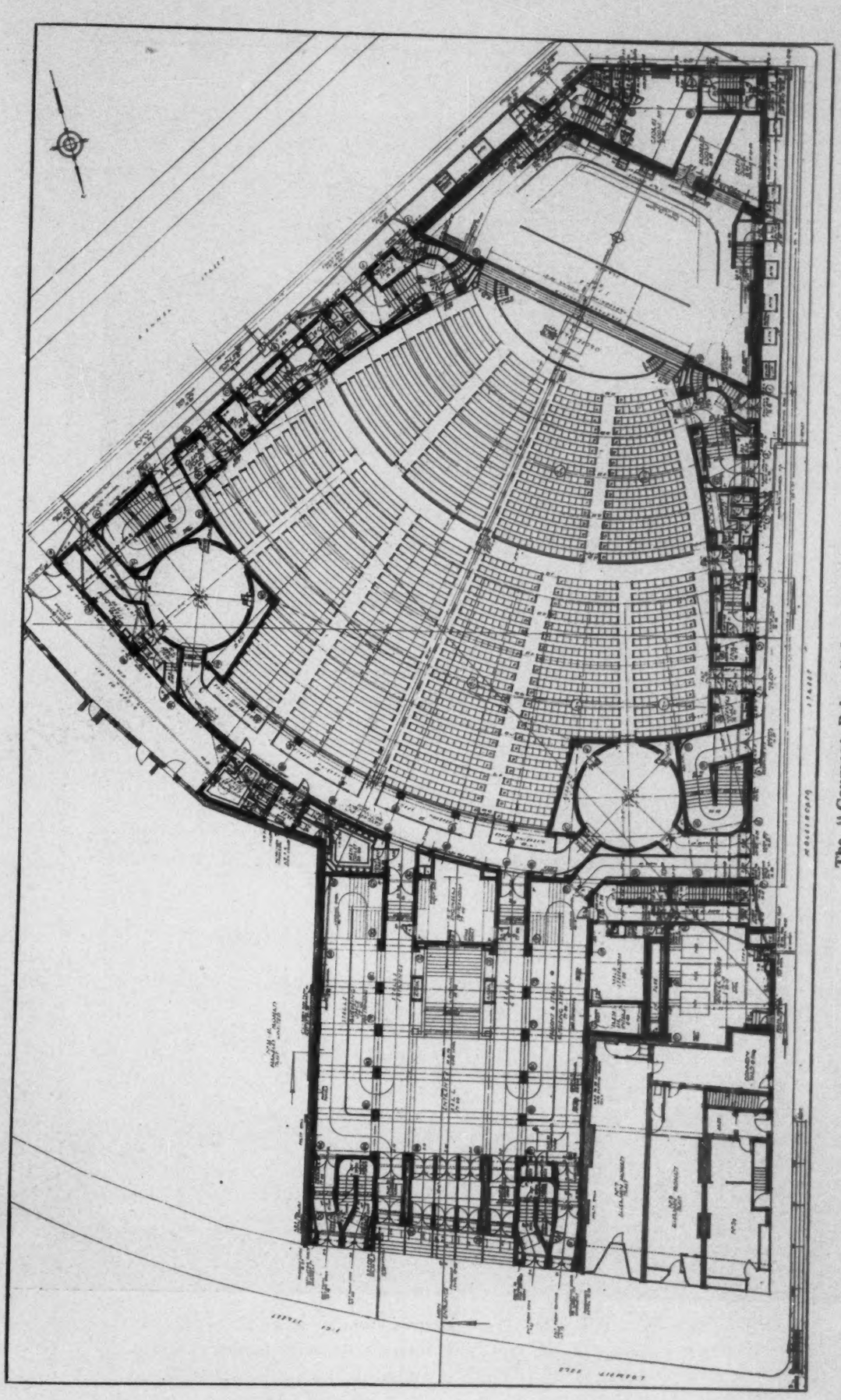
The "Gaumont Palace," Lewisham.

MR. W. E. TRENT, F.R.I.B.A., Architect.

Photo: Bedford Lemere.

The "Gaumont Palace," Lewisham: Entrance Hall.

Mr. W. E. Trent, F.R.I.B.A., Architect.



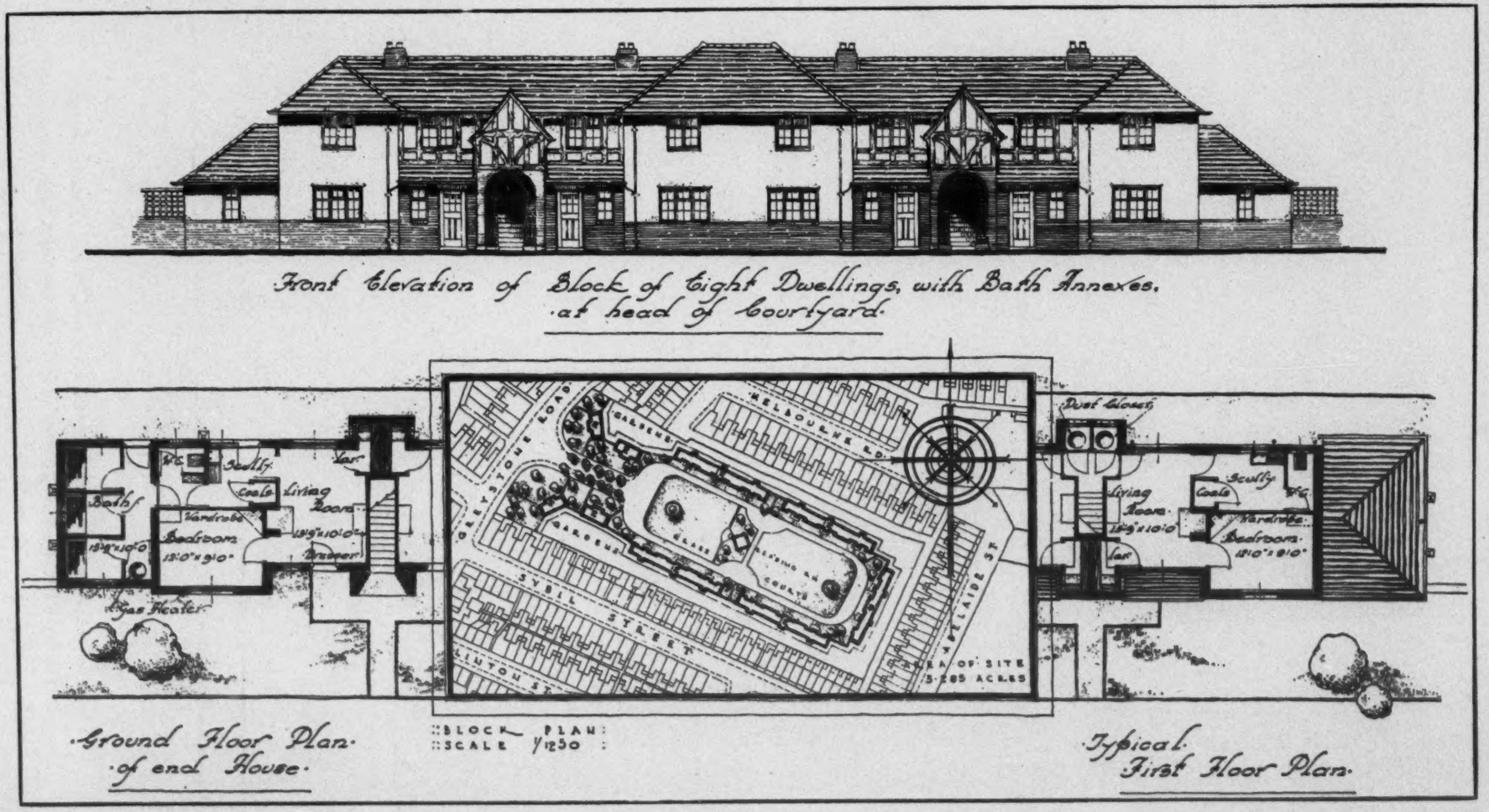
The "Gaumont Palace," Lewisham.
Mr. W. E. Trent, F.R.I.B.A., Architect.

Detail of Entrances.

General View.

Dwellings for the Aged Poor, Margaret Creighton Gardens, Carlisle.

Mr. Percy Dalton, A.R.I.B.A., A.M.Inst.C.E., City Engineer and Surveyor.



Dwellings for the Aged Poor, Margaret Creighton Gardens, Carlisle.

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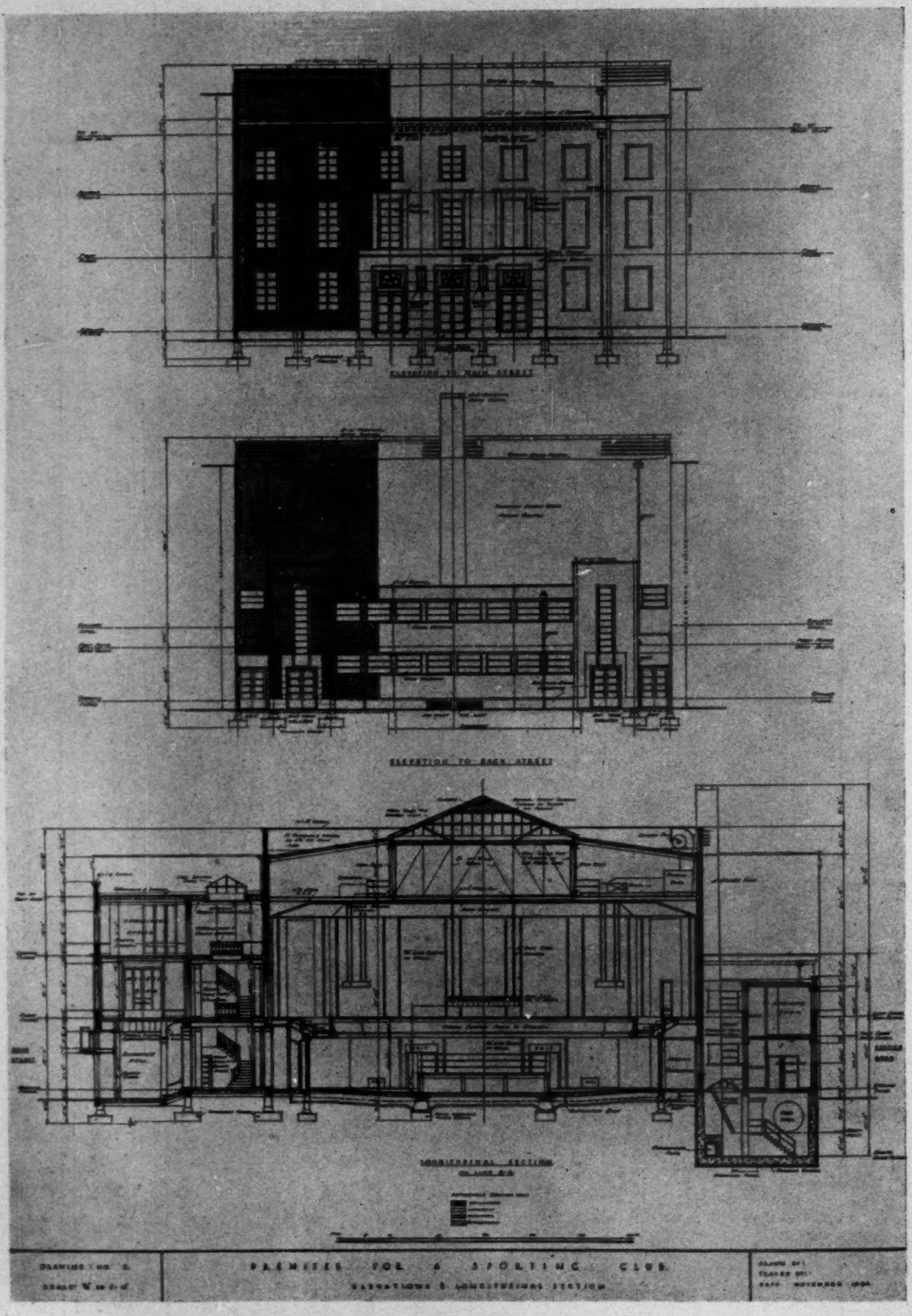
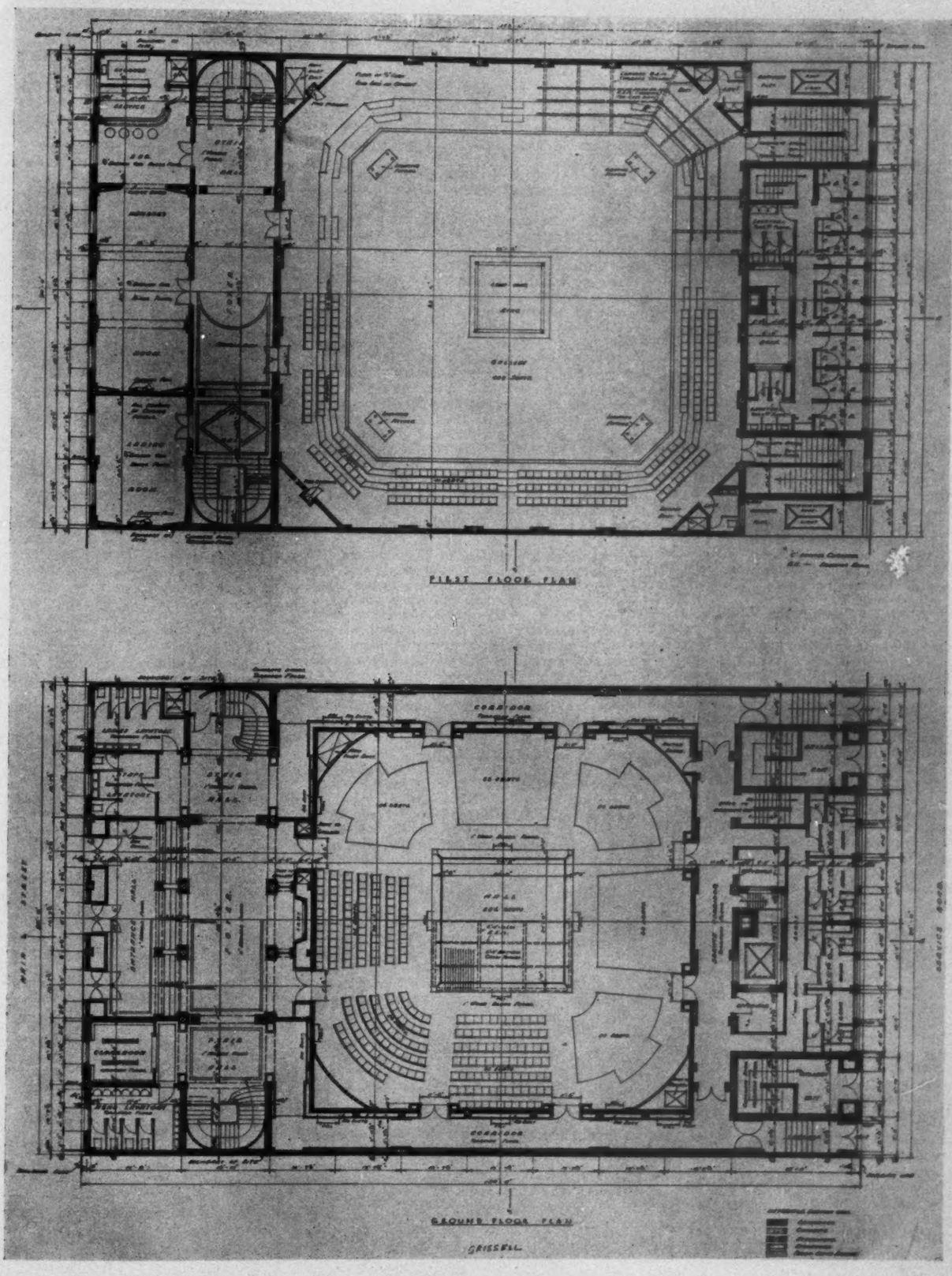


The Grissell Gold Medal.—" Premises for a Sporting Club " : Winning Design.

By Mr. Robert Ashton (Architectural Association).



The Grissell Gold Medal.—"Premises for a Sporting Club": Winning Design.

By Mr. Robert Ashton (Architectural Association).

GREATER LONDON HOUSING CAMPAIGN

XVII.—THE HOUSING (FINANCIAL PROVISIONS) BILL, 1932.

By JAMES P. ORR.

The object of this Bill, which reached the Committee stage on December 15, 1932, is to put an end to subsidies under the Housing Acts of 1923 and 1924, leaving only the subsidy under the 1930 Act in operation, and to encourage private enterprise, and in particular members of building and provident societies, to build houses to be let to the working-classes. These societies are to be encouraged to finance the building of such houses by the co-operation of Government with local authorities in the system of guarantee against loss on housing loans, which the latter are authorised to enter into under section 92 of the Housing Act, 1925. The proposed guarantee is limited to two-thirds of the extra capital which a society will, in virtue of the guarantee, advance to its members in excess of what it would normally advance without such guarantee.

Societies normally advance up to 70 per cent. of the value of the house; under the proposed guarantee they would probably advance another 20 per cent. The Bill limits the joint liability of the State and the local authority to two-thirds of this extra 20 per cent.; and this liability is to be shared equally by the two guarantors. These proposals are based on the belief (i) that this sharing of possible loss will induce local authorities to make wider use of their power of guarantee; (ii) that the limitation of the societies' liability to 76⅔ per cent. of the value of the house will induce societies to advance capital for many houses up to 90 per cent. of value; and (iii) that the facility for borrowing this 90 per cent. will induce members of these societies to build "houses intended to be let to persons of the working-classes" (cl. 2 of the Bill) in vast numbers.

The decision to abolish the Wheatley subsidy is based mainly on the belief that, when relieved from the fear of competition by subsidised municipal building (except within the limited sphere of the 1930 Act), private enterprise will, under the stimulus of the new guarantee, supply new houses at low rentals in such large numbers as to solve the housing problem, and that without any State subsidy or putting any burden on to the rates.

It is certainly true that there is no need for municipal house-building in any locality in which the conditions are such that private enterprise can be effectively mobilised, and there is consequently a reasonable prospect that the particular families who are suffering from defective housing will find relief through a substantial increase of new dwellings suitable to their needs and *actually available for them at rents which they can afford.*

For instance, in places in which houses can be built at an all-in cost of £360 (the present average for the whole country, according to the Minister of Health (*v.* Hansard, December 15, 1932, col. 547)), and can therefore be let by local authorities at 10s. 2d. and by private owners at 12s. per week, inclusive of rates and without subsidy (*ib.* cols. 547 and 556), the Bill has a good prospect of achieving its ends; for it is possible to make the municipal rent even lower than 10s. 2d. for the poorest families by adopting the family rebate system described in *The Builder* of December 17, 1932. But is there any prospect of such low rents being reached within any appreciable time for working-class flats in Central London without subsidy and without any burden on the rates? The available evidence points to a contrary conclusion.

The L.C.C. Housing Committee, in reporting on the new Bill, have declared, with reference to statements which have appeared as to the rents at which building societies could let their houses under the proposed guarantee, that they cannot accept the figures as being applicable to London. They have not given any figures as to the loss on their own subsidised flats within the county: but it is well known that in their Central London blocks the cost per dwelling is little short of twice the cost of a small suburban cottage, and that, consequently, although their Central London rents are far beyond what the poorer wage-earners can afford, the loss per dwelling is far beyond that in cottage estates. Even in the case of their cheapest type of cottage, they report, the deficiency at present cost of construction, with money at 4 per cent. and no subsidy, would average in different localities from £2 17s. to £4 12s. a house a year for 60 years.

As for the effect of the proposed extension of the system of guarantee under the 1925 Act, it is only the L.C.C., not the Borough Councils, who can give such guarantees in London County. They have so far made no use whatever of this power; and in view of the figures just quoted it is most unlikely that they will be approached by any society for a guarantee in respect of flats to be let to the poorer, overcrowded families whom the L.C.C. have so far failed to rehouse in Central London.

It seems, then, only too likely that, even on the doubtful assumption that the new Bill will in Central London lead to increased activity of private enterprise in building, the new building operations will fail to bring about that vast increase of the pool of cheap dwellings without which there can be no hope of solving the special housing problem of London—viz., the abatement of serious overcrowding in houses divided into lettings and sub-lettings.

On the contrary, it seems only too likely that the new policy will result in a repetition of the sad experience of the last twelve years, during which the erection of vast numbers of working-class dwellings has tended only to aggravate that problem. So long as the new dwellings are let, as most subsidised dwellings have been, *at rents which the lower-paid workers cannot afford*, not only is there no addition to the pool of cheap dwellings, but the existing pool is actually reduced by several dwellings through increase of their rents on decontrol in the series of vacations resulting from each removal of a tenant from a controlled dwelling to a new dwelling.

It is true that this aggravation of the problem will be mitigated, if control of the cheapest dwellings is continued till 1938, as proposed in the Rent Restriction Bill; but there will be no real advance towards solution of the problem unless and until the poorer families in urgent need of relief from overcrowding are put into new dwellings or into cheap dwellings vacated by tenants selected for the new dwellings.

Under this new Bill, however, what guarantee is there that the "houses *intended* to be let to persons of the working-class" will in fact be let to such persons, or that the rents will be such as the particular families who are most in need of relief from bad housing can afford to pay? Even if the beneficiaries under this Bill, i.e., the borrowing members of building societies, do reserve their houses strictly for persons of the working-class, what guarantee is there that they will select as tenants the particular families whom the local authority want to see rehoused or that they will concern themselves about what use is made of the dwellings from which their tenants have moved? What is to prevent them from adopting the basis of selection which has made the provision of subsidised houses so futile as a solvent of the real London housing problem, viz., the method of giving priority to the better-paid families?

It is only when the new houses belong either to local authorities or to owners in treaty with local authorities to use their houses in furtherance of the latter's rehousing schemes that the rehousing of the particular families whose relief from bad housing is essential to solution of the local housing problem can be achieved. This is real housing, as distinguished from mere house-building. It is work for which the local authority alone is the proper agency. The desired result—the satisfactory rehousing of the worst-housed families—can be brought about only by co-operation between local authorities and charitable housing societies or house owners—never by independent private enterprise working for profit. The theory that it can come about automatically through mere house-building, by whatever agency, has long since been exploded.

Such rehousing of particular families by local authorities, whether independently or in co-operation with private enterprise, is duly provided for in the 1930 Housing Act; but operations under that Act can never, as the Act now stands, cover in actual practice more than a very small fraction of the seriously overcrowded dwellings in London; so, if the activities of local authorities are to be confined to operations under the 1930 Act, the position as regards the housing of the poorer wage-earners in Central London will in 1938 be about the same as, if not worse than, now.

Thus the intention of this Bill will in London be completely defeated in respect of its ulterior object; for its sponsors are relying on it to secure by 1938 such an increase in the number of houses available for the poorer working-classes that there shall then no longer be any objection to decontrol of houses of £20 or less rateable value, the present scarcity of which has compelled the Government to make provision in the Rent Restriction Bill, 1932, for the exemption of houses of this class from decontrol till 1938. Unless this Bill is radically amended in Committee, the case for continuance of control will in 1938 be stronger than ever. In these circumstances it seems necessary to continue the 1924 subsidy in London until a real "margin of empties" is re-established among dwellings of the type that unskilled labourers ordinarily occupy.

It is, however, for consideration whether the 1924 Act should not be amended so as to confine the subsidy to schemes specially sanctioned by the Minister of Health, after he has satisfied himself that a subsidy is necessary in the area concerned, in order to ensure the early rehousing of all families enrolled in a schedule of urgent cases framed under an officially recognised criterion of urgency (*vide* article on abatement of overcrowding in London published in *The Medical Officer* of September 17, 1932).

In order to provide a standing safeguard against abuse of the subsidy, the Minister of Health should have authority to attach to the grant of a subsidy conditions as to

i. Five-yearly reviews of the finances of every subsidised scheme, with a view to *reduction or withdrawal of the subsidy*, as change of circumstances may require;

ii. Method of *selection of tenants;*

iii. Method of *determining what rent each tenant should pay.*

Under this last heading the Minister might well consider whether he should not insist on adoption of some such rent-rebate system as is described in the article entitled "The Family Rebate System" in *The Builder* of December 17, 1932: for this system secures economy and efficiency in the use of the subsidy, in that it ensures that every tenant of a subsidised dwelling shall pay a *rent as near the commercial rent as he can for the time being afford*, and so take his share in reducing to a minimum the demand on the public purse which the subsidy involves.

Another great advantage in the family-rebate system is that it knocks the bottom out of the plea that private enterprise in building houses for the working-classes is discouraged by fear of unfair competition of municipal enterprise; for the beneficiaries under the family-rebate system are all families who cannot afford the local commercial rent. As soon as a subsidised tenant becomes able to pay that commercial rent he is required to leave the subsidised dwelling and make way there for a poorer family from the schedule of urgent cases. Under this arrangement *the subsidised tenant will always be one who is not or should not be among the competitors for private dwellings.* So long as municipal housing is strictly confined to meeting the reasonable needs of ill-housed families for whom local private enterprise does not

supply dwellings of decent standard at rents which they can afford, there is nothing in that municipal enterprise to discourage private enterprise that is genuinely anxious to provide the working-classes with decent dwellings at fair rents.

Where it is found at the quinquennial review (§12 (i)) that the local authorities, instead of letting subsidised houses at the lowest rents possible without loss, and selecting as tenants only those very badly housed families who cannot afford the higher rents at which suitable homes are available for them in the locality, let them at considerable profit to just anyone who applies, the purpose of the subsidy is defeated. The subsidy should, therefore, be withheld until the tenants or rents are changed so as to bring the housing scheme into harmony with the intention of the subsidy law.

THE HOUSING (FINANCIAL PROVISIONS) BILL AND THE BUILDING SOCIETIES

By WALTER HARVEY (General Manager, Burnley Building Society).

This two-clause measure has received its second reading and is now in the committee stage, where it will no doubt be subjected to the full force of the promised opposition. It provides for the partial withdrawal of subsidies and the acceptance of the scheme submitted to the Minister of Health on behalf of the National Association of Building Societies, whereby societies, under joint guarantee with the State and local authorities, propose to finance the building of small houses to let at rentals within the reach of the poorer working classes.

That scheme has for many months been the subject of discussion and negotiation between the Ministry of Health and the Housing Committee of the National Association of Building Societies, of which committee I have the honour to be chairman. In putting forward the scheme we were influenced not only by what we considered to be the good of the building-society movement, but also by the larger and more important consideration of the national need for help in the solution of the problem of housing the working classes.

On the whole our proposals have been warmly welcomed as a step towards the restitution of private ownership of houses to let, but there have appeared criticisms, to some of which I would like to refer. Mr. John G. Martin, Secretary of the National Housing and Town Planning Council, writing in the *Municipal Journal*, says that a limitation of the statutory obligations imposed on local authorities under Section 25 of the Housing Act, 1930, to undertake the housing of the working classes as often as occasion arises (that is, whenever there is a genuine need not being met by other agencies) is unthinkable at the present time, and that "the work must be energetically dealt with by municipal enterprise, with adequate State assistance, for some years to come."

That, of course, would mean a continuance of the present costly and uneconomic system. And how is it possible for "other agencies" to meet the need for working-class houses so long as subventions from the national and local exchequers enable municipal authorities to bolt and bar the door against competition by those "other agencies"—that is, private enterprise? Opposition from local authorities is perhaps only to be expected, because any proposal to clip the wings of civic expenditure is interpreted as a reflection on civic pride, and therefore to be resented, however costly that spending may have been to the ratepayers and taxpayers.

Socialist writers offer uncompromising opposition to a plan which arrests the flow of public money, lightly ignoring the heavy burden to which taxpayers and ratepayers are committed for the next half-century. One of these journals prints an interview with Mr. Coppock, Secretary of the Building Trades Operatives' Federation, whose forecast is surprising in one in his responsible position. "Heavy increase in unemployment and ruin for hundreds of builders," is one of his predictions. He adds that for many years there has been nothing to prevent building societies doing the work that is now projected in the Housing Bill. Has there not? To mention only one obstacle: Has Mr. Coppock never heard of the gap between the normal limit of building-society loans and the cost of building or valuation of a house—a gap now bridged by the tripartite guarantee plan?

More restrained, but not less unjust, is the criticism by Sir Raymond Unwin, President of the Royal Institute of British Architects. He accuses building societies first of an anxiety to secure the elimination of all competition arising from the present house building by local authorities, and then to be permitted to lower the standard of layout by increasing the density of the dwellings from 12 to 20 per acre. My answer to this charge is that it is the province of local authorities to spend public money on housing only where private enterprise fails to meet the need, and that this need, where it exists, has in many instances been established by shutting out private enterprise through the medium of unfair competition. Building societies could not, even if they would, eliminate local authorities from fair competition, and in this respect they will have the same liberties under the new Act (minus the subsidy, of course) as they have hitherto exercised.

Nor is it any part of the building societies' policy to increase the density of houses per acre. That suggestion, as has been abundantly made clear, came from the building trade, and not from the building societies, whose concern in the new housing proposals is purely of a financial character.

The suggestion in the Socialist Press that the Government, in its "economy madness," is legislating for a lower standard of housing, with smaller and fewer rooms and unsatisfactory roads and surroundings, is, I think, effectively answered by the assurance of the Minister of Health that the Bill is in no sense an economy measure, but is designed to promote the most-needed class of housing, and to concentrate also upon the structural regeneration of the slums. It will still be within the power of local authorities, when the subsidy is withdrawn, to maintain by enforcing their regulations the same standard of housing as has hitherto been required by the State under subsidy. Their guardianship and authority in this respect is consequently strengthened rather than weakened by the withdrawal of State grants.

The purpose of the Bill is to utilise the ample funds and large experience of building societies in meeting the great social need of more small houses. Local authorities are to be encouraged to exercise the powers of guarantee conferred upon them by the Housing Act, 1925, in respect of houses to let, the Government undertaking to make good one-half of any loss incurred by any local authority under the scheme.

Many building societies are now prepared to make mortgage advances on blocks of small houses, built to let, up to 90 per cent. of a valuation to be settled in agreement between the local authority and the building society, under guarantee of the difference between a mortgage loan of, say, 70 per cent. and the limit of 90 per cent. referred to (*i.e.*, 20 per cent. of the advance) such guarantee to be carried jointly by the Government, the local authority, and the building society advancing the loan, in the proportion of one-third each, the liability thereon, of course, diminishing *pro rata* with repayments of instalments of principal and interest. To simplify administration, while preserving the three-party guarantee plan, local authorities will be empowered to work it in conjunction with building societies, under authority to charge the Government with its (the Government's) proportion of any realised loss which might fall on the guarantors on sale of property belonging to a defaulting mortgagor.

To give an example of the working of the scheme: If a builder or private investor were to undertake to erect, say, 50 houses of an approved type and cost, and in an approved situation where tenancy was likely to be continuous and permanent, to let at a fair rental, he could be financed by a building society or group of societies on the lines suggested. The machinery for giving effect to this could be quite simple—much on the lines of that now operating between a number of local authorities and building societies under guarantee schemes. The Minister of Health will, of course, have to be satisfied that the guarantee is only for the amount of the advance in excess of normal, and is in respect of houses of the required type. The rate of interest which the building societies propose to charge on these special guaranteed advances is 1 per cent. under their current minimum rate for other mortgage loans, and the repayment period is extended to 30 years. It is believed that these terms will encourage the building of small houses and that with goodwill and energy our scheme can be made of immense value for the national good.

I suggest that architects and builders who desire to build under the scheme should get into touch with the building societies known to them. If any very large number of houses in any one area is in contemplation it may be necessary to deal with a group of building societies, in which case I shall be willing to do what I can.

"THE BUILDER" DEBATE

LVIII.—BUILDING SUBSIDIES.

"That subsidies from public funds for house building have hindered the development of building."

Sir,—Following upon recent Bills before Parliament, this subject might easily develop into a tame anti-climax. I feel, however, that the debate stands upon its own merits, irrespective of whatever legislation may have been passed. The result of the argument may stand as a warning for future legislators of the "panic" temperament who may be tempted to repeat a disastrous experiment at some future time, when conditions may be repeated, to give a face-value to such a move. If we can only get firmly in our minds what are the first principles of the question, we shall be more ready to offer a sound opinion the next time a plausible platform speaker appeals to the sentimentality of the masses.

In all matters of industry there is a fixed and definite ratio between the values of capital expenditure and revenue arising out of same. In the case of the building industry that ratio is one between the cost of building and the rental values of buildings. The revenue to be anticipated must be based ultimately upon the cost of production, however it may be artificially maintained at other levels over a limited period of time. In other words, the selling price of goods is a scientific value depending upon capital values, which latter cannot be influenced by the subsequent operation, though the cost of production may react upon capital values in future operations. To disturb this scientific interplay of influences is a disastrous operation.

Yet this is exactly what has been done in the building industry in two directions. Existing houses have been "controlled" as to rents, and new houses of a class have been subsidised to reduce the apparent capital outlay. We have therefore created two, and possibly three, conditions in the same or similar markets. The small house of subsidy type has been built at a cost to the individual of £100 to £50 below its real capital value. The small house of slightly over subsidy type has been built at actual cost. The small pre-war house of subsidy size has been let at a rent, not based on actual costs at all, but on the

rental existing before the War, plus an arbitrary percentage increase. The relatively low rentals scientifically possible under subsidy building were therefore prejudiced by their existence side by side with lower rentals maintained under the Rent Acts. The futility of such arrangements is obvious.

But the worse condition is that which maintained a disparity between the house of 950 square feet and the house of 1,000 square feet, properties differing actually very little in potential values, but artificially divided by a gulf, the greater depth of which was measured by the value of the subsidy. The activity of house building, instead of maintaining an elastic preparedness to meet the needs of all sections of the community, thus became concentrated upon one small section, to the damage of all interests, including those of the very class designed to be served.

It may be urged that however patent may be the defects of this system, it was designed to meet unexpected circumstances which could not otherwise be met, and to make good a shortage arising out of the War conditions. This is admitted, though it cannot be allowed that the conditions presented no alternative of treatment. The obvious and sensible method of treatment was to allow rents to take their natural level upon the basis of current capital costs, taking care only to check deliberate profiteering upon unusual conditions of supply and demand. To judge profiteering simply upon the fact that an owner is making a very handsome profit is unsound. If this were the test, the world must be full of the breed. What the seller is entitled to is the cost value of his goods under existing conditions, plus a fair return upon same, and less some value of depreciation where the goods are secondhand. In the case of a house, this is the cost of building a similar house to replace it, plus a fair profit, less some depreciation for its age; and this value may be expressed either as a capital sum or as an annual return.

For many years following the War these alternatives bore no relation. A house would sell for so much, but would let in many cases only for 2¼ per cent. or 3 per cent. of that value. In other cases the disparity was exactly reversed, so that throughout the housing market there reigned complete chaos. Can it be expected that sound business men should speculate in such a market? Is it surprising that those who did speculate were generally men of straw, who not only brought about their own ruin, but threatened the foundations of others of better substance?

What would have been the result of allowing this important market to find its own level? Rents would have risen throughout the country, and enterprise would have stepped in legitimately and by gradual degrees restored the normal balance. To suggest that this would mean ruin to the small man is not justified by facts. Everything else was up in price, and he managed to overcome the occasion, and there is no justification for suggesting that the rent would be the "last straw." Clothes were nearly three times pre-War cost. Food was at least double. These increases had to be adjusted on wage values, and the rent should have taken its place in this adjustment. Had sloppy sentiment been excluded from the picture of the starving tenant and bloated landlord, these matters would have settled comfortably down into their proper places.

Let us hope that recent legislation will quickly bring about a healthy return to the normal.

POSITIVE.

New R.C. Cathedral, Liverpool.

Some details of the new Roman Catholic Cathedral at Liverpool and the foundation-stone laying plans were given by the Archbishop of Liverpool, Dr. Downey, speaking at a lecture on behalf of the Cathedral Fund. Satisfactory progress was being made in the work of preparation for the laying of the foundation-stone of the Metropolitan Cathedral next Whitsuntide. Sir Edwin Lutyens had designed a magnificent altar for the occasion which would serve until it is replaced by the high altar of the cathedral.

PROGRESS OF TIMBER RESEARCH*

Dry Rot.

THE report of the Forest Products Research Board, issued this week by the Department of Scientific and Industrial Research, refers to the improved facilities available for large-scale investigations into dry rot and the death watch beetle, made possible by the completion of the new experimental building erected at the Forest Products Research Laboratory, Princes Risborough.

The ground floor of this building, the report states, contains a series of rooms in which solid floors are laid with and without bituminous damp-proof courses and in which the boards are fixed to the concrete in various ways. One room contains all the undesirable features which are found in badly constructed houses—there is no ventilation under the floors and the soil beneath is not concreted over. There is no dampproof course and the outer wall is solid. In another room, on the other hand, the construction is good and every precaution has been taken to ensure that there is adequate ventilation under the floor. The floors can be removed in sections for examination, and half-length panels, some of deal and some of oak, have been placed on the walls, and have been treated with various paints and varnishes. "Every section of flooring and every panel was infected at the beginning of the summer with a piece of wood containing the dry rot fungus, *Merulius lacrymans*, in active growth, and the floors were covered with linoleum. The first inspection of the infected floors and panels was carried out four months after infection, and it was found that in the "bad construction" room and on some of the solid floors, the fungus had already made considerable growth, spreading several feet from the points of inoculation."

A record is being obtained of the variations in the moisture in the timber resulting from the various types of construction, and a further record is kept of the temperatures above and below the floors.

"As soon as decay has reached a certain stage, it is proposed to test out various methods which have been suggested for sterilising *in situ* members such as joists, which are mechanically sound but carry traces of infection. The infected floors will also provide an excellent testing ground for determining the resistance to dry rot of various new Empire timbers which it is proposed to use for flooring.

"The resistance to dry rot of various makes of wall board is being investigated. The majority of the pulp boards so far tested have proved susceptible to fungal decay provided they are kept sufficiently moist."

Investigations of the Death Watch Beetle.

Numerous inquiries have been received by the Laboratory during the year seeking information upon the death watch beetle and methods of control. It is stated that the correspondence clearly shows "that the damage caused by this insect is frequently confused with the less important and less serious damage caused by the common furniture beetle or even by dry rot fungus." The investigations carried out have again dealt primarily with the biology of the insect, special attention being given to the relation between the life of the insect and the conditions which affect its existence and propagation.

"An adequate supply of insects for this work has been difficult to obtain. With the assistance of architects and builders a large quantity of timber showing the characteristic death watch beetle damage has been collected, but the numbers of insects obtained from this material have been, as in previous years, extremely disappointing. Partly decayed willow trees in the neighbourhood of the laboratory have proved a much richer source of supply than timber taken from buildings. Such old willow and oak trees are the natural habitat of *Xestobium*, and it may be assumed that when timber is badly attacked the conditions prevailing in it correspond more or less closely to those of the insect's natural habitat. Confirmation of this is being obtained from experimental work in progress in the laboratory. Investigations have been continued into the effect of variation in moisture content of timber at different temperatures, and of the presence or absence of fungus on the rate of development of the insect. At the present stage it would appear that the optimum conditions in timber for the development of *Xestobium* include a comparatively high moisture content and the presence of fungus attack. Even under such conditions the rate of growth of larvæ is extremely slow. The duration of the life cycle of the insect has been estimated by previous workers at two to three years; the laboratory experiments show that it is more likely to extend to five or six years."

It is intended to use the upper floor of the dry rot experimental building for studies on the death watch beetle. It is stated, however, that during the past year it has not been possible to infest the building with this insect because suitable conditions of attack did not exist. Experiments are being made to determine the most satisfactory means of obtaining the desired humidity conditions.

Incense and the Death Watch Beetle.

"Some preliminary experiments," the report states, "have been carried out upon the effect of incense on the death watch beetle. It has frequently been suggested that the use of this substance in churches may prevent attack by *Xestobium*. Larvæ were removed from wood and exposed in a concentrated atmosphere of incense fumes for periods up to a maximum of two weeks. No visible ill-effects were apparent in any of the insects. No information is available upon the cumulative effect of incense, but it seems unlikely that the use of this substance would have any deleterious effect on the larvæ."

Tests of Insecticides.

The report refers to the difficulties encountered in carrying out satisfactory tests of the efficiency of various insecticides intended to destroy the death watch beetle. A difficult problem which has not yet been solved is that of determining the effect of an insecticide intended to destroy insects living at various depths within the timber. Owing to the impossibility of selecting samples of wood known to contain living insects it has not been possible to carry out tests of insecticides on death watch beetles themselves. "The future development," says the report, "of accurate and reliable laboratory tests of insecticides for use against wood-boring insects depends not only on the provision of standard material, but also upon information on the penetration of liquids and gases into timber and upon chemical studies of insecticides suitable for the control of wood-boring insects."

Reconditioning of Timber.

In the report of the Board for 1930, particulars were given of the successful method of treatment by which a defect in imported Tasmanian oak, having the appearance of excessive shrinkage but due to the actual collapse of the wood cells, could be remedied by high temperature steaming in a drying kiln. During the year this treatment has been applied successfully to other classes of defect in a variety of timbers, and warping, cupping, and bowing in home-grown elm, beech, and ash have shown the same excellent response to the treatment. "Not only were the defects almost entirely removed, but the material showed an unexpected and appreciable increase in width and thickness. The advantages of the reconditioning process, not only in the striking improvement of the quality of the timber, but in the increase of measurement, make it a valuable addition to trade practice. Mechanical tests so far carried out serve to show that the process does not impair the strength of the timber."

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* Summary of the Report of the Forest Products Research Board for the Year 1931. Published by H.M. Stationery Office, price 3s. 6d. net.

Empire Timbers.

Considerable progress is recorded in the work on Empire timbers. "An attempt has been made," says the report, "to determine how far it would be possible to supply the whole of the Empire's demands for timber from Empire forests, and it would appear that a vigorous policy of development and exploitation of the forest resources of our colonies and dependencies could eventually render the whole Empire almost, if not quite, independent of all foreign supplies of hardwoods. Softwoods are in a different category, yet it is clear from statistics already obtained that there is room for a considerably greater consumption of Canadian softwoods within the Empire.

"At present, attempts to extend the markets for Empire timbers suffer in many cases from irregularity of supplies, lack of proper grading, and seasoning, lack of knowledge of market requirements, insufficient stocks in quantity and variety available in the United Kingdom, and, in certain cases, the high cost attendant on small and unorganised production. Defective supplies, moreover, add considerably to the normal cost. Foreign supplies, on the other hand, are regular, extremely well prepared, available in ample quantity and variety, and cheap.

"If the trade in Empire timbers is to attain the proportions of which it is capable, it is essential to strive for the same degree of efficiency, and there seems no reason why this should not be achieved. We emphasise the opinion expressed in last year's report that the first and indispensable step to this end is to carry out thorough botanical and economic surveys of the forest resources in the tropical colonies. We realise that existing forest service staffs are in many cases inadequate for undertaking this work, but we consider that the necessary increase should be well justified by results. Three facts seem to be beyond doubt; that the available tropical hardwood resources are ample and suitable, that a very considerably increased trade is possible, and that the present moment provides an exceptional opportunity for securing the trade."

Improved Instruments.

The report describes improvements in the design of seasoning kilns, new apparatus for the determination of humidity in the kilns, and a method of employing the photo-electric cell in the study of wood structure by using it to measure the percentage of empty space in the interstices of a timber due to its cell structure. Apparatus is also described which determines the gloss of a machined surface measures the finish on a surface by recording by measuring the amount of light scattered or reflected from it. Another instrument the frictional resistance experienced by dragging a standard metal plate over the surface.

Wood-working Properties of Timber.

"One of the most important factors in wood-working," says the report, "is the influence of the cutting angle of the tools on the finished product and on the energy consumption of the machines. In most wood-working machines this angle cannot be altered, but a special attachment has been designed which can be applied to planing and spindle moulding machines, and which will enable the cutting angle to be varied." The report emphasises the importance of work of this description in bringing a new timber on to the market. "A new Empire timber is often condemned by the machinist as 'unworkable' simply because machines, developed to deal with timbers in common use, are not suited to the very different structure of the new timber. A modification of feed speed, cutting speed or cutting angle may be all that is necessary to make the most obdurate timber workable, but in order to foretell these modifications a knowledge of the way in which the cutting action of any tool, whether plane, saw or drill, should be related to the structure of the wood on which it is to work is essential."

Testing of Timber.

A great deal of testing work was carried out during the year.

SOCIETIES AND INSTITUTIONS

R.I.B.A. TITE PRIZE AND THE SOANE MEDALLION, 1933.

Preliminary Competitions.

The attention of intending competitors is called to the fact that the preliminary competitions for the Tite Prize and the Soane Medallion will be held in London and at centres in the provinces on Wednesday, March 1, and Thursday, March 2, respectively. Forms of application for admission to the preliminary competitions may be obtained at the R.I.B.A., 9, Conduit-street, W.1. The closing date for the submission of forms of application is Friday, February 10.

At a Council meeting of the R.I.B.A. held on Monday, January 9, the following members were elected :—

AS HON. ASSOCIATE

J. S. Wilson

AS FELLOWS

A. J. Butcher
C. J. Norton
L. S. Stanley, M.A. Cantab
Michael T. Waterhouse, M.C., B.A. Oxon.
E. Williams, M.A., B.Arch.
C. Gustave Agate.
Lieut.-Col. R. B. Armistead.
S. I. Chermayeff
A. G. Crimp
C. Kennard
Sir M. M. Ochterlony
F. M. Palmer
G. Randle
A. Sunderland
G. P. H. Watson
H. E. Folkes
T. H. Smith

AS ASSOCIATES

M. D. Berman, Dip. Arch. Cape Town
T. H. Birks (Victoria University, Manchester).
U. A. Coates, B. Arch. Lvpl.
R. F. Fairhurst, Dip. Arch. Lvpl.
B. M. Flegg, A.A. Diploma
A. G. Gibson (A.A.)
H. V. Gordon
G. F. Greenaway (Victoria University, Manchester)
D. Martineau (Cambridge University and A.A.)
H. R. Myerscough-Walker (A.A.)
F. N. Peace, Dip. Arch. Lvpl.
W. C. Poppleton
J. P. Stott (Victoria University, Manchester)
I. D. Wilcockson

AS LICENTIATES

Capt. A. S. Ash
G. Bellis
H. Carr
Capt. H. J. Cox
A. A. Higuer
E. Milburn
S. H. Rushworth
R. P. Shutt
E. L. Smith
B. Waterhouse
H. F. Webb

INSTITUTE OF LANDSCAPE ARCHITECTS.

The Baroque Gardens of Germany.

In the course of an address to this Institute, at the Royal Horticultural Hall, S.W., on January 10, Mr. G. A. Jellicoe suggested that the reason so little was known in England about the eighteenth century gardens of Germany was because war for a long time stopped research into the historical architecture of that country. The gardens of Italy, France and Austria were well known, and he ventured to think that those of Germany were of almost as great an interest. In the eighteenth century Germany was divided into over 300 free states or cities, and this gave immense variety to her architecture. While the general impression was true that her garden design was under the influence of Versailles, yet German character was always expressed.

The route the lecturer followed started from Vienna, for the Hapsburgs, he said, were the head of the Holy Roman Empire, and the accepted leaders of the States. Crossing into Bavaria, he suggested how the great gardens of Nymphenburg and Schloissheim, near Munich, were directly influenced by Versailles, for the Elector Max Emanual was a strong ally of Louis XIV.

The palace garden at Wurzburg was famous for its ironwork, but the little garden at Veitshocheim, a few miles away, gave greater appeal through personal charm. This had been described by Sacheverell Sitwell as one of the most romantically beautiful gardens in Europe. Two charming gardens from Bamberg were shown, and an amusing and decadent example, the Hermitage, from Bayreuth.

Discussing illustrations of the Zwinger garden at Dresden, the lecturer compared this architecture to that of the stage, and commented on the theatricality of the whole of the age he was describing. Frederick the Great's little palace of Sans-Soucci at Potsdam was shown, and the palace garden, with its little theatre, from Hanover—once the home of the English kings. The great fantasy of Wilhelmshöhe at Cassel was described as perhaps the most remarkable example in Europe of a garden dream carried out into actual fact.

The gardens of West Germany, said the lecturer, formed the basis of many modern cities, and it was interesting to note that those cities that had grown up on the lines of the old palace lay-out made finer cities to-day than those built on the mediæval plan. Broad streets and open spaces at the centre were preferable to parks around the outer boundaries of a congested centre.

The park at Benrath, near Düsseldorf, was of especial interest, because it combined "free" planting and formal design. Clearly the influence of the English school of landscape gardening was being felt. Slides were shown of the gardens of Bruhl, Bonn, Schwetzingen, Brüchsal, and Ludwigsburg. These led up to that well-known example of town-planning, Karlsruhe.

MANCHESTER SOCIETY OF ARCHITECTS.

Displacement of Architect and Craftsman.

The monthly sessional paper was delivered at the Manchester Society of Architects on Wednesday, January 11, when Mr. H. B. Creswell, F.R.I.B.A., spoke upon "The Displacement of the Architect and Craftsman by the Engineer and Industrial Worker." The speaker, in the course of a witty and interesting "talk" (for so he preferred to describe it rather than as a lecture), said that architecture was sound building plus something else, while engineering was sound building minus something. The fine architecture of the past, he said, instancing Beauvais Cathedral and the domes at Santa Sophia and elsewhere, had been based upon empirical construction and built with natural materials, which came from the earth—stone and slate quarried from the ground, bricks and tiles made from clay, and timber from living trees. Engineering, on the other hand, a science of comparatively late growth, was largely concerned with synthetic materials, largely produced for commercial reasons, and no fine work had ever been produced in this world in which the main motive was profit.

The speaker described an imaginary material named "Arto." He did not know if there was a material of that name, but, if not, there would be one before long. This material, he said, was composed of the waste from paper mills, mixed with the blood and the sweepings from hairdressers' shops, and was better than stone, wood, lead or bronze.

Mr. Creswell's talk was greatly appreciated by a large audience. Objection was taken to many of his remarks by several of his hearers, including some engineers who were invited to be present, and a lively discussion followed.

COLLEGE OF ESTATE MANAGEMENT.

Noise and Vibration in Buildings.

Mr. C. W. Glover, lecturing at the College of Estate Management recently, said a building to be reasonably soundproof must also be reasonably airtight. Consequently, the only way to bring about a change of air in such a building was by the use of mechanical ventilation. Discussing the elimination of vibration in buildings, the lecturer pointed out that the structure of a building, especially the modern steel-framed building, conveyed mechanical vibrations with great facility. Present-day economic conditions demanded the use of the minimum of material. Consequently, all floors and partitions were of minimum thickness. In fact, there was no better sounding-board than a loaded floor of modern construction. It really was necessary to take great care to isolate such a floor from the rest of the building if the transmission of troublesome vibration or noise

was to be prevented. Isolation of vibration could be effected by use of an elastic medium interposed between the vibrating body and the body to be isolated.

Though there had been some misunderstanding in the past as to the definition of the word "noise," he thought it was generally agreed that it was not an acceptable phenomenon. Music in one man's house might appear as noise to his neighbour. Suppression of noise had to be dealt with, more especially in view of the fact that buildings now tended to be constructed of thin diaphragm walls and floors, which transmitted noise with the utmost facility. Noises greater than 50 decebels of intensity were definitely dangerous in that, if they persisted over a long period, they would lead to deafness. Indeed, it was not true to say that a man working in a boiler-shop became "used to the noise." What actually happened was that he used considerably more energy than necessary in concentration upon his work. It was not an easy matter to absorb noise or dissipate it in other ways. Therefore the first endeavour should be to deal with noise abatement by suppressing the intensity of noise at the source. For instance, inasmuch as noise from passing traffic was brought into the body of a room by reflection from the ceiling, obviously if a ceiling was rendered absorbent, the utmost possible reduction of noise in any part of a room would be secured.

COLLEGE OF ESTATE MANAGEMENT.

Town and Country Planning Act.

In the first of two lectures at the College of Estate Management, Lincoln's Inn Fields, recently, Dr. R. C. Maxwell, Past President of the Town Planning Institute, dealt with the Town and Country Planning Act, 1932. The man-in-the-street, he said, had wakened up at last to the need for planning. The strong feeling on the subject throughout the country had been shown by the number of petitions and representations urging the Minister to go on with the Bill. Unfortunately, a number of people had been suspicious of the measure, and during its passage through Parliament it had had to combat innumerable misrepresentations and misunderstandings. Many of the amendments which it now embodied were included as concessions to get the measure through. Owing to the Bill being an entirely new Bill and not an amending measure, the whole question of planning came up for consideration. It might have been possible to have brought in an amending measure which would have limited the field, but the difficulty of drafting would have been enormous and have doubled the task of the Government, and so a new Bill was brought in.

The lecturer pointed out that all town planning was really an outgrowth of public health law generally and of by-laws in particular. The first step forward was the Housing and Town Planning Act, 1909, followed by the Acts of 1919 and 1923, which were consolidated in the Town Planning Act, 1925, the Act which was still in force until April 1 next. After that date the whole of the general law relating to town and country planning would be found in the new Act, and no doubt it would be supplemented in due course by regulations of the Ministry of Health relating to procedure, and by model clauses. To students of town planning, nothing could be better than to obtain a pamphlet entitled "Town Planning in England and Wales," published at a few pence by the Ministry some years ago, and giving a clear account of the law in general terms as it stood before the passing of the new Act. This would form a good jumping-off point for a study of the new Act.

The lecturer then proceeded to discuss in detail the more important sections of the new Act.

Architect's Estate.

Mr. Frank Beckitt Lewis, of 6, Castle-road, Nottingham, late city architect of Nottingham, left estate worth £8,416, with net personalty £8,306.

ARCHITECTS' AND BUILDERS' INQUIRY BUREAU

QUESTIONS.

Ownership of Fences.

SIR,—Can any of your readers give me a definite ruling as to the ownership of fences between properties? I have at times found that dividing fences are not clearly defined on transfer deeds. Can one be guided by the method of construction of wood fences in particular? SURVEYOR.

Stuck Gates.

SIR,—I am struggling with stuck gates every day, and also see many disfigured by the planing of the edge. If the uniting surfaces of post and gate were slightly sloping instead of square, gates would shut right up to post and never could bind. Also, if posts were placed ever so little out of true, it would not be noticeable, and gates would shut without springs. This seems such common sense that it is most surprising that all builders of these new suburban houses have not adopted the methods. I should be glad to hear from any who will do so. S. WALWYN.

Water-pipe Noises in Bedroom.

SIR,—My thanks to "Check" for his reply to my inquiry; unfortunately he has mis-read my letter and has quite missed the point. There was no mention of water-hammer or noisy ball-valves; I quite understand how to deal with these. I referred to a bedroom where hot and cold are laid on. Since the change-over from lead to copper pipes, every normal bathroom and cistern noise now reverberates in this room. Can anyone suggest a safe method of isolating by rubber connections? If anything of that nature could be devised without risk of bursts, would it solve the problem? D.

Measurement of Work and Variations.

SIR,—What is the standard method of the quantity surveyor in dealing with (1) measurement of work (including variations) in progress for the purpose of certificates; (2) final variations and account?

As regards (1). Can the builder request the quantity surveyor to measure up with him all the work, together with all variations, say, one week before each certificate is due, in such detail as will suffice its inclusion in the final account? If the surveyor should raise any objection to this course, has the builder any right to insist that he does so? On the other hand, is it customary for the builder and quantity surveyor simply to go over the job and agree, without detailed measurements, a certain value for work done, leaving variations to be dealt with on completion?

As regards (2). Notwithstanding the clause in the 1931 agreement, which specifies a certain time for final measurements, can the builder insist on the surveyor's dealing with all variations and measurements during progress of work, and so arrange to have the final account ready, say, within a week of practical completion?

The point is this: If detailed measurements, including all variations, are dealt with monthly, then there would be no difficulty in arriving at the final figure within a week of completion of the job.

The difficulty, as I understand it, is of the builder being unable to insist on such measurements being taken, in view of the clause in the R.I.B.A. contract. A definite ruling on this point would be very helpful—at least, to the writer PERPLEXED.

ANSWERS.

Damp Walls.

[ANSWERS TO "W. H. R.," JANUARY 6.]

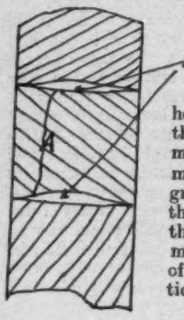
SIR,—If "W. H. R." would plaster stud the walls, he would have no further trouble with them. Of course, he must hack off all the cement rendering before fixing up studs. G. B. (Holloway).

SIR,—The causes of damp walls in "W. H. R.'s" bungalow may be: (1) Broken slate dampcourse; (2) condensation. In the case of the former, the cure is the examination and repair of such dampcourse. It is more likely to be caused by condensations, as it apparently has shown only "since the damp weather started"; had it been damp from below, it would have crept upwards slowly, whatever the weather. To cure the condensation, it will be necessary for air bricks to be fixed as high as possible in the affected room. I presume there is no chimney in the affected room, and little ventilation. Parian cement, being hard, would not, I think, absorb the damp atmosphere, as would cheaper plaster, and as the damp cannot get into the plaster it will affect the paper, just as painted walls will show moisture, even in a house with perfect dampcourse. More air is obviously needed, and will eventually cure the trouble. R. H. W.

Masonry Joints.

[ANSWERS TO "MASONRY," JANUARY 6.]

SIR,—The probable cause of the defect is that the bed joints have not been worked to a true surface—in other words, the beds are hollow, with the result that, on shrinkage of the mortar or any slight settlement of the structure, great stress is set up in the stones, especially at the edges of same, and may forcibly cause some of the stones to split vertically, as at A on sketch. H. ALLCROFT.



SIR,—The cause of breaking is pressure of one stone on another. The stuff they were bedded together with was too hard. If looked closely into, it would be found that the bedding stuff is harder than the stone, which should not be. G. B. (Holloway).

Slates.

[ANSWER TO "ROOFS," JANUARY 6.]

SIR,—Dark blue-grey roofing slates are obtainable from Westmorland quarries, similar in thickness and texture to the better-known green. The price delivered in the South is not very much different from the green type. LAP.

Blow Holes.

[ANSWER TO "OWNER," JANUARY 6.]

SIR,—These are generally the result of plastering with putty that has not been run for a sufficient period to be thoroughly slaked and not properly screened free of lumps. Each blow hole is evidence of a piece of quick lime newly slaking, and the process may continue for many months. After this the holes may be safely filled in. Where plastering is on breeze blocks in which there are portions of material not completely burnt, these will also blow out holes in the plaster. In such cases it is necessary not only to fill in but to remove the portion of unburnt material from the breeze before doing so, as otherwise the process will repeat. PLASTER.

"Arras" Palisades.

[ANSWER TO "STUDENT," JANUARY 6.]

SIR,—I expect "Student" means palisade fencing done with arris rails and arris poles, as seen in parks

G. B. (Holloway).

Cement Stucco.

SIR,—The words "cement stucco" in the trade usually mean a finished rough surface of plastering, whereas "rendering" generally means one or two coats of cement and sand, finished in a moderately smooth manner. In general terms, cement rendering is one-coat work; if more coats are done, they are termed finishing or setting coats.

R. H. W.

THE BUILDING TRADE

MINOR PROBLEMS OF CONSTRUCTION AND REPAIR—III

By A BUILDING SURVEYOR.

SMALL SEPTIC TANKS (*continued*).

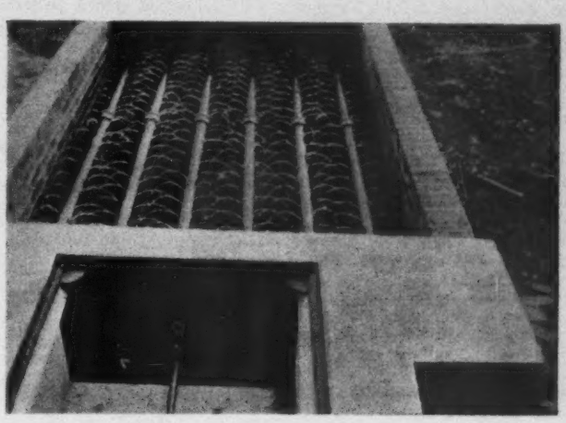
The accompanying diagram, except in regard to some minor modifications, is based on a working drawing supplied by a well-known firm of manufacturers who specialise in this class of apparatus, and it is here selected for illustration on account of its simplicity. Where the builder has to instal a system and satisfactory results are required with a minimum of after attention, simplicity of construction is an essential point. It is usually stated that the capacity of the septic tank should be based on the average daily flow, which, in point of fact, in relation to a small system of this sort, cannot as a rule be definitely calculated. The flow in one period of twenty-four hours or of a week or a month may be more than double that of similar periods occurring during differing seasons. In the past the tendency has been to make the septic tank too large, and the "filter" bed either too small in actual size or through want of effectiveness. The tank shown would give reasonably satisfactory results for a fair-sized house accommodating some half-dozen of more or less permanent residents and would not be unduly strained by a greater flow on occasion.

It will be noted that the diagram does not provide a grit chamber. It is assumed that all roof washings and surface water will be diverted and otherwise disposed of without entering the tank, this being desirable from every point of view. The mistake should not, however, be made of diverting waste water under the impression that it may be harmlessly discharged directly to a ditch, for this may bring results as noisome as the discharge of an insufficiently treated effluent from the water-closets. As much as possible of mineral grit should be intercepted by means of mud buckets but without over-rating the importance of it.

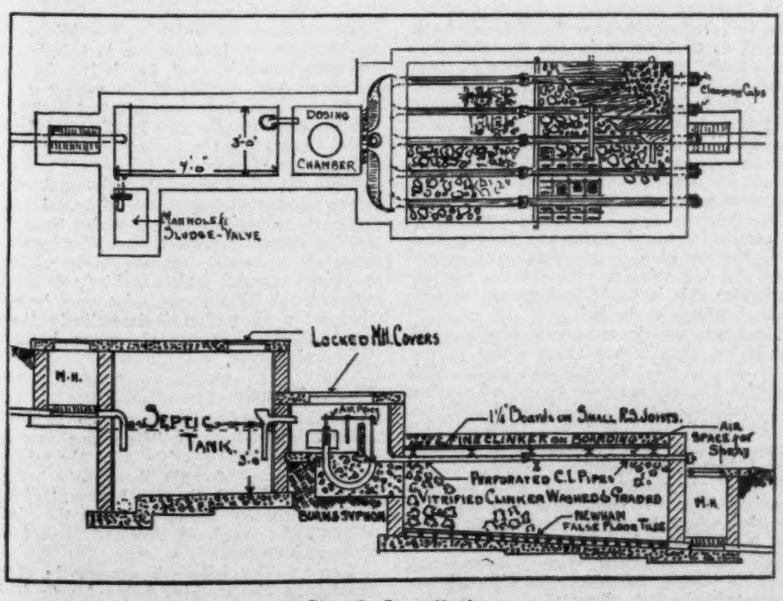
A separate manhole (as in the previous diagram) is here shown as giving direct access to the sludge cock. This is not a very usual feature, but is one that the writer's experience leads him to regard as being very desirable. Where after-attention is unskilled, it is better that both the sludge valve and the discharge from it should be visible to the operator than that they should be out of sight and thus call for some exercise of judgment.

The small compartment accommodating the syphon is known as the dosing chamber—so called because it measures out volumes of effluent to be given to the "filter" bed in regular doses. In many systems this purpose is served by tippers and various other contrivances designed to secure an even and regular spread. The particular merit of the method shown is that there are no moving parts; and, further, it does not matter much if the spraying pipes become slightly out of level by reason of small settlement taking place, which is a matter of greater moment where distribution is made by means of open channels discharging effluent over the sides. The photograph of the system under a trial run is sufficiently clear to make further explanation of this matter unnecessary. It may, however, be added that on quite small systems where the provision of a filter bed is not considered to be necessary by reason of the open nature of the soil, it is still desirable to fit a syphon and dosing chamber so that the effluent may be propelled through a good length of trench and not merely dribble out near the outlet.

We now come to a very important part of the system—the so-called filter beds. This is the home of the aërobes or outdoor workers, who must be given air to work properly. They will live in, on, or cling to broken brick, stone, stoneware, and any other suitable material; but clean, hard, washed, and graded furnace clinker, free from sulphur, because of its cellular structure, approaches closely to the ideal. Such a material will retain both air and moisture for a sufficient length of time for the outworkers to perform properly the job allotted to them. In the present case, taking advantage of the sloping site, a good depth is available for the "filtering" material. On a flatter site it might be necessary to lessen the depth, but increase the area of the beds, and in that event provide a different means of distribution. It would, however, take up too much space here to go into these varying alternative methods, and readers must be referred to the text-books. The following hint may, however, be of value. Manufacturers of this and similar apparatus usually make available to intending purchasers the services of an expect technical staff capable of dealing with site problems, and the cost of the service is not directly reflected in the individual transaction, but is spread over the entire range of goods sold. If, therefore, a site presents special difficulties, by all means consult them, but do not on that account neglect to acquire some elementary knowledge of the subject, for with very full directions available, it is still very easy, without knowledge, to make mistakes.



View of Installation under trial.



A Simple Installation.

In some respects the filter chamber shown acts much after the same manner as "contact beds," the principal difference being that the filling, standing full, emptying, and resting or aerating periods are not precisely fixed, as would be the case with contact beds operated on the usual lines. In the case of public works, these operations cover definite and ordained periods designed to obtain an orderly sequence. Thus, one complete cycle of eight hours would often be thus disposed of: one hour filling, two hours standing full, one hour emptying, and four hours aerating. Three such cycles would thus occur in every twenty-four hours. Here, however, the sewage will not usually be flowing for some eight to ten hours at night, and in but small volume in any one hour of the day. The series of operations does, however, sufficiently resemble those of a "contact" bed to make that term more appropriate than "filter" bed. The effluent from a bed formed after the manner shown in the diagram will be reasonably clear, but its appearance may be still further improved by passing it through a filter of sand or gravel.

One of the worst difficulties to overcome is the disposal of an effluent from a septic tank on a flat site with a clay subsoil, the site being very small and devoid of natural drainage channels such as stream or open ditch. Usually, however, if excavations are carried to a sufficient depth, the clay will be pierced, and though the underlying bed of gravel or sand, or even soft rock, may

already contain water, it will still permit access to more water—that is to say, absorb the effluent. If, therefore, a shaft is sunk through the clay and lined with, say, concrete drainpipes, the effluent may be turned into it where there is no danger of contaminating drinking water supplies. Even if water is reached, the effluent may still be turned in, for no appreciable difference will be made to the underground water level. To make this point quite clear, it may be put this way: let it be assumed that a shaft is sunk and water is found at 12 ft. below surface level in summer and some slightly lesser depth in winter; if one suddenly tipped a hundred gallons of water into it, the rise in the water level would be such that it would perhaps subside to its former level within five minutes. In the case of soft rock the process of absorption may be a slower one, but as there will be a long interval under ordinary conditions during which no considerable volume of effluent will be discharged, this is not a matter of much importance. The sinking of the shaft should be continued until some two or three feet of water stands at the bottom, for even with a well-filtered effluent there will be a slight deposit and the bottom may need cleaning out at infrequent intervals; perhaps once in ten years.

In some cases, where the clay subsoil is not so stiff, it may absorb water slowly. If so, an area may be dug out and dry loose filling be substituted for the excavated material. The bottom may well be deeper at the centre than at the sides and the discharge pipe from the filter chamber be carried to the centre. It should not in any case be regarded as a substitute for the filter bed, for when this as well as the last-mentioned method of disposal has to be resorted to it is more and not less important to get a good effluent from the tanks. Such a bed may be covered by a raised banking of soil carefully turfed so as to throw off rainfall. A further point to be noted is that in such event the filter chamber (on the plant) will usually require to be shallow and therefore of greater area, in order to avoid waterlogging.

There are many other points in design on which variations may have to be made to suit site conditions, but they need not here detain us, as our present purpose is but to discuss some of the more important guiding principles of construction. Once these are grasped, most of the difficulties ordinarily met with can be overcome by giving sufficiently early thought to the project regarded as a whole.

Definitions for Fire Resistance.

A publication, "British Standard Definitions for Fire Resistance, Incombustibility, and Non-inflammability of Building Materials and Structures," now issued by the British Standards Institution, should prove to be one of the most useful issued by that body. It should appeal to: (*a*) the public, who are sometimes denied the use of suitable materials and endangered by the use of unsuitable material; (*b*) the architect, who hesitates to make full use of all the new materials on the market in case they may not satisfy the law; (*c*) the manufacturer, who cannot market a new material or form of construction because he cannot prove that his productions will satisfy legal requirements; (*d*) the officials who administer the building laws, who have to decide what meaning is to be attached to the terms used.

The British standard definitions will automatically clear up these difficulties. In drawing up these definitions the committee responsible has carefully examined existing legal provisions with the idea of elucidating the original purpose behind them, in order that their real intention could in most cases be fully met by the application of the new definitions. Methods of test are included. Copies of this specification (No. 476—1932) may be obtained from the Publications Department, British Standards Institution, 28, Victoria-street, S.W.1, price 2s. 2d. post free.

THE BUILDING RESEARCH STATION

QUESTIONS AND ANSWERS.*

THE following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for general application to all similar problems.

Failure of Magnesium Oxychloride Floor Finish.

The contractors for a large city building requested the Building Research Station to inspect and report upon certain magnesium oxychloride jointless floors in which abnormal cracking and loosening of the material had occurred. The jointless floor was laid on a pumice concrete screeding, and, in certain cases, the major shrinkage cracks in the floor finish coincided with shrinkage cracks in the screeding beneath.

REPLY:—Magnesium oxychloride flooring, particularly when it contains a large proportion of wood filler, is liable to undergo a very large shrinkage on drying which is much greater in magnitude than that of any of the building materials with which it is usually employed. Unless this shrinkage can be restrained, a thin floor finish of this kind must inevitably crack; in practice the necessary restraint is usually provided by adhesion to a relatively non-shrinking base.

Pumice concrete is a material which itself is generally liable to greater shrinkage than normal gravel concrete. A certain amount of cracking must undoubtedly be attributed to shrinkage of the pumice concrete screeding underneath the flooring, but this is not sufficient completely to account for the exceedingly bad condition of these floors. The worst cases arise when the adhesion of the magnesium oxychloride finish to the base concrete fails; this has actually occurred over large areas in the floors inspected. When this happens, the excessive shrinkage of the floor finish is quite unrestrained, and it must be expected to crack up generally.

No examination could be made of the pumice concrete, but the condition of the floors suggests that it may not have been a simple matter to obtain a good bond between the magnesium oxychloride finish and the pumice concrete. It is generally recognised that an essential process in applying a plastic material, such as plaster or mortar to any kind of surface, is to adjust the "suction" of the background so that water is not removed from the plastic material at an excessive rate. Pumice concrete may be expected to behave differently from a normal, dense cement mortar in this respect, and it seems questionable whether it would have been possible under any circumstances to obtain satisfactory conditions for adhesion of the finish to the base. An examination of a sample of the floor finish shows that the material contains a very large proportion of wood fibre, and this necessitates the use of a large quantity of magnesium chloride solution to make the mixture workable; this is likely to increase the ultimate shrinkage of the finish.

There are certain secondary effects which should be taken into account where magnesium oxychloride cement is used. This material has an aggressively corrosive effect on certain metals, particularly steel and iron. During the inspection it was observed that water service pipes leading to a radiator passed through a magnesium oxychloride dado, and that no insulation had been provided round the pipe. In consequence the pipe was corroded where it passed through the dado, and it was strongly recommended that this should receive attention, since, if no steps are taken to arrest corrosion, the pipe will be perforated. In fact, all metal pipes, conduits, etc., which pass through floors or dados should be inspected and where no insulation exists this should be provided.

It is assumed that the main function of the pumice concrete is to provide cover for various services, such as electric cable conduits, pneumatic despatch tubes, etc. It is the practice of floor layers to flood the concrete base with magnesium chloride solution in order to control suction, and it is therefore quite possible that the magnesium chloride solution may have penetrated the pumice concrete where it may lead to corrosion of the various conduits and tubings, etc. The fact that the lower coat of the floor contains a high proportion of wood fibre is a likely cause for the use of an excess of magnesium chloride. Therefore, before taking steps to relay these floors it is most desirable to ascertain whether there is a high content of magnesium chloride in the pumice concrete, and whether there are any signs of corrosion of the conduits and tubings, etc., embedded in it.

In view of the failure which has already occurred it may be felt undesirable to relay the floors in magnesium oxychloride, especially as this will necessitate the introduction of additional magnesium chloride. Any finish which involves the introduction of a considerable amount of water is to be deprecated, as the presence of moisture will promote corrosion where the magnesium chloride is already present in the concrete.

Corrosion of Lead Gutters.

Information was sought on the corrosion of lead gutters of a bacon-drying stove. The bacon was stored in racks in a building some 30 ft. high; during the process of drying sawdust was allowed to smoulder on the concrete floor, and the smoke escaped through a louvred top-light in the slate roof. The lead gutters running along each side of the roof were badly corroded at intervals.

REPLY:—At the outset it should be mentioned that it is a little difficult to hazard a definite opinion on the trouble without first-hand knowledge of the conditions under which corrosion is taking place, or even without an examination of the corrosion products formed on the lead, especialy since it is noted that no trouble has arisen in other stoves constructed in a similar manner to the one in which failure occurred. It seems quite likely, however, that the cause of failure may be attributed to the vapour given off by the smouldering sawdust. A small laboratory experiment showed that the vapour expelled from heated sawdust contains an appreciable amount of acetic acid which would certainly lead to the corrosion of lead.

The manner in which such acidic vapour could reach the lead gutters in this instance can only be conjectural, but it is quite possible that condensation of the vapour on the slate may have been an important factor. It would then be quite easy for the acid deposit to be washed into the gutters by rain and thus set up corrosion.

With regard to remedial methods, it will be appreciated that any form of metal gutter would be likely to corrode under these conditions and some protective coating would be required. Asphalt appears to be the only covering material which is likely to be unaffected. A bituminous paint may be effective for a time, but it is unlikely that it would afford a permanent cure unless carefully maintained.

Plaster Failure.

Serious cracking of plaster on lathing of ceilings and stud partitions was reported. The architect had specified that the mix was to be one part of chalk lime putty to three parts of sand with the usual amount of hair, and immediately before applying the plaster about 10 per cent. of Portland cement was to be added.

REPLY:—The failure is apparently of the usual type, the cracking being due to drying shrinkage. Failures of this kind are to some extent inherent in the materials used, and

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perhaps it would be helpful to summarise the present position as regards plaster finishes generally. At the outset it must be admitted that this is far from satisfactory, but some of the more serious difficulties will be removed when British Standard Specifications are available for plastering materials; a very great deal of work has already been done in this direction, and publication of the specifications should not be long deferred unless unforeseen complications arise.

Ungauged lime plasters on lathing are probably the most prolific cause of failures of any building materials. Modern craftsmanship, and particularly modern building conditions, render the traditional materials inadequate. Haste for completion makes it impossible to allow sufficient time for undercoats to dry and shrink, and to carbonate, before finishing coats are applied. There is also a much greater risk of disturbing fresh plasters. Numerous specialist tradesmen, such as electricians, pipe fitters, etc., may be expected to be working in the building while the plaster is still green, and the shrinkage and warping of insufficiently seasoned timber will contribute to the general disturbance.

It follows, therefore, that a lime plaster must of necessity be gauged with a proportion of some cementing material having a definite hydraulic set: Portland cement is very commonly used. The alternative would be a calcium sulphate gauging plaster of a suitable slow-setting type. These plasters are ideal for the purpose since they do not shrink appreciably on drying; unfortunately, there are as yet no standard specifications, and the characteristics of the various types of plaster are often not fully appreciated by the operatives, so that failures due to misuse are by no means infrequent.

A gauging of Portland cement such as has been specified in the case under reference should eliminate the worst type of failure where ceilings on lathing collapse entirely due to inadequate key strength; it will not, however, overcome the difficulty of shrinkage crack formation. Portland cement is a material which shrinks on drying, and this, of course, is the cause of the almost universal cracking which cement renderings exhibit. On solid backgrounds the shrinkage of a Portland cement gauged plaster may be restrained by the unshrinking backing, but lathing does not provide the necessary restraint, and the tendency to crack formation then depends entirely upon the drying conditions during and immediately following the plastering operation. If the undercoats can be allowed ample time to dry and complete their shrinkage before the finishing coats are proceeded with, it is quite possible to obtain a good job, but under ordinary building conditions this is an ideal state of affairs which can hardly be hoped for. It more often happens that thorough drying out only takes place at a much later stage in the history of the building when it is being prepared for occupation. If, as is sometimes the case, the drying process is accelerated in cold weather by forcing the heating installation, the likelihood of extensive cracking is very much accentuated.

Accelerated Drying of a Building.

A contractor estimated that the moisture content of a building, which had been considerably delayed in erection, was between 18 and 21 per cent., and he considered that conditions were far too damp to commence joinery work. Plastering and the laying of terrazzo floors had been started, however, and since the architects were anxious to heat the building as soon as possible, the contractor wished to know whether reduction of the moisture content to within 12 and 14 per cent. by artificial heating would result in drying shrinkage and cracking of terrazzo and plaster finishes. He also wished to know what would be the limit beyond which it would be unwise to dry out the building.

REPLY:—It would be agreed that accelerated drying is likely to have objectionable results, although it is not possible to lay down any arbitrary rate of moisture loss which would be safe.

The effects are likely to be more serious, if anything, with finishes other than ordinary plasters; the tendency to shrinkage crack formation in terrazzo finishes and cement rendered backings would be augmented, and rapid drying of structural concrete work would also tend to produce cracks which would not form when drying was permitted to take place gradually. The tendency of tiled floors to "arch" from their bed would be also accentuated, and a case has recently been investigated where an extensive failure could be attributed almost entirely to accelerated drying with artificial heat. It seems, within practical limits, that the rate of drying is more important than the ultimate stage to which the building is dried out in a case of this sort.

Corrosion of steel by Breeze Concrete.

An architect inquired about the corrosion of an iron service pipe which passed through a breeze concrete partition.

REPLY:—Deterioration of steel or iron in contact with breeze and clinker concretes is well known. A number of such cases are reported from time to time, and judging from a superficial examination of the piece of piping submitted the failure in the present instance is of the usual type.

It is now realised that a number of causes, in most cases all arising out of the properties of the breeze concrete itself, may contribute to the rusting of steel when the two materials are used in contact with each other. Of these the porous structure of the material, and the probability of the presence of compounds of sulphur, may be said to be the most likely factors which would lead to corrosion. The subject is fully dealt with in Building Research Special Report No. 15, "The Corrosion of Steel by Breeze and Clinker Concretes" (H.M. Stationery Office, price 6d. net). As is explained in this report, the porous structure of these concretes allows ready access of moisture and oxygen and so permits rapid rusting, although the effects produced by moisture permeability alone should not be considered the primary cause of corrosion; if, however, sulphur compounds are present, as is usually the case with a clinker aggregate, the combined effects of all three factors, i.e., free access of moisture and oxygen, and the presence of sulphur, will then undoubtedly cause rapid corrosion. It is also probable that, as the result of their absorptive powers, breeze or clinker aggregates may promote corrosion of steel even under "dry" indoor conditions.

Under ordinary conditions of manufacture, it is virtually impossible to obtain a breeze or clinker aggregate which could be safely assumed to be free from sulphur compounds; it is important, therefore, that steel or iron should not be used in direct contact with this material, and if, in the laying of service pipes, it is found impossible to avoid penetrating a breeze or clinker concrete partition, suitable precautions should be taken to protect and insulate the piping where it passes through the partition.

BOURNEMOUTH EMPLOYMENT SCHEME

WE are interested to learn that the Employers' Association of the Bournemouth Building Trades is co-operating with the Bournemouth Unemployed Fellowship in a scheme to provide work for local building trade operatives. Details of the scheme are set forth in the *Bournemouth Daily Echo*, from which it appears that members of the Association are prepared, during January, February and March, to execute any work at practically net cost in an endeavour to reduce the serious amount of unemployment that exists in the local building industry. For its interest as a pioneer attempt, on unusual lines, to alleviate unemployment, we reproduce below the official announcement as it appears in the Bournemouth newspaper:—

TO HELP THE UNEMPLOYED.

The members of the Bournemouth Employers' Association for the Building Trades are willing for the first three months of 1933 to carry out all work entrusted to them through this appeal at PRACTICALLY NET COST.

The greatest proportion of our local unemployed is normally engaged in building work.

Building is Bournemouth's main industry, and is the keypoint in the economic structure, and any improvement therein would quickly radiate.

There must be so much work which requires attention, especially in the smaller matters of general repairs, decorations, sanitary work, etc.

It is always sound policy to put in hand repairs and painting, and to remedy defects, at the earliest possible moment.

Prices of materials may never be so low again.

Will you please fill in the space below and forward the form to your builder, or the Bournemouth Unemployed Fellowship, Yelverton-road, when your requirements will receive immediate attention?

Being anxious to help to relieve unemployment, I should be glad if your representative could call and estimate for work to be done at the special terms offered.

Name (BLOCK LETTERS) .....

Address .....

.....

Date .....

In an accompanying article it is pointed out that nobody can possibly question that it is the duty of every citizen who can provide work of any kind to give employment *now*. "And who will hesitate," the article continues, "when, by doing so, he or she will be benefiting themselves as well as those less fortunate folk, the unemployed in our midst? Moreover, it is abundantly clear that the burden of taxation can be appreciably lightened by providing work for these men instead of allowing them to continue unemployed. A whole-hearted determination to put in hand what work can be found will do much to relieve the local situation, and to that extent the national problem as well. . . .

"Most properties need attention of some sort—repairs, repainting, or what not—and few of the owners or occupiers concerned will need to be reminded that delay in such matters too often spells, in the long run, greatly increased cost. Those already contemplating the carrying out of such improvements later in the year would be well advised to ante-date their projects, and so take advantage of this remarkable opportunity."

Building Operatives' Wages.

The National Joint Council for the Building Industry have decided that from Feb. 1 the wages payable to craftsmen and labourers engaged in the industry should be decreased by one halfpenny per hour, provided that the rate payable to labourers in any grade should not be less than 75 per cent. of the craftsmen's rate.

London Master Builders' Sports Association.

We give below results and tables in connection with the Football League of this Association up to and including Saturday, January 7:—

Dec. 10.—Limmer	1	Trocoll	0
,, 17.—Ham River	2	Limmer	3
,, 17.—Trocoll	1	Tellings	7
Jan. 7.—Higgs	4	Trocoll	2

	P.	W.	D.	L.	Goals F.	Goals A.	Pts.
Tellings	5	5	--	—	32	3	10
Higgs	6	4	—	2	22	12	8
Trocoll	7	4	—	3	20	15	8
Limmer	6	4	—	2	10	10	8
Ham River	3	—	—	3	5	16	0
Downs	7	—	—	7	3	36	0

NEW BUILDINGS IN LONDON

Aldgate.—ALTERATIONS. — Messrs. Leslie and Co., Ltd., Kensington-square, W.8, are carrying out alterations to the Aldgate branch post office, for H.M.O.W.

Baker-street.—RECONSTRUCTION. — Messrs. Marshall and Tweedy, FF.R.I.B.A., of 4, Cavendish-place, Cavendish-square, London, W.1, have been appointed architects, and have prepared plans for the reconstruction of 15 and 17, Baker-street and George-street. The contract for the building work has been secured by Messrs. E. and J. Cotton, Ltd., 74, High-road, Chiswick, W.4, and the shop-fitting contract has been let to Messrs. Wm. Mason and Son. Messrs. C. H. Loeland and Co. are the sole agents.

Bromley. — CONVENIENCES. — Tenders are invited by the T.C. for the construction of new public lavatories in the Library-gardens, High-street. The plans have been prepared by the Borough Engineer, Mr. Harold Cliffe.

Bromley.—FLATS.—Six blocks of flats are to be erected on the property known as "Ravensbourne sports ground," with three entrances to Warren-avenue and close to "Ravensbourne" Southern Electric Railway Station. The elevations are to be varied to represent private houses and chalets. Fifty lock-up garages are also provided. The architects are Messrs. P. Palgrave and Partners, 2-3, Duke-street, St. James, S.W.1.

Caterham.—SHOPS.—A block of shops is to be built in Whyteleafe-road from plans by Messrs. Bethell and Swannell, 16a, John-street, Adelphi, W.C.2. The contract for this scheme is about to be settled.

Chadwell Heath.—HOUSES.—A new company, called Cullimore Estates, Ltd., has been formed to carry out a development scheme, including about 50 houses and, later, a number of shops. Plans are under the supervision of the director, Mr. F. D. Cullimore, 121, Grange-road, Ilford.

Chelsea.—PREMISES.—A building is to be erected at 124 and 124A, King's-road, S.W.3, for the International Tea Company's Stores, Ltd. The architect is Mr. F. W. Shenton, F.R.I.B.A., 27, Fitzroy-street, W.1. The builders are Messrs. Allen Fairhead and Sons, Ltd. Sydney-road, Enfield.

Cricklewood.—EXTENSIONS.—Messrs. Wallis, Gilbert and Partners, 29, Roland-gardens, South Kensington, S.W.7, are preparing plans for extensions to the works of Messrs. George Kemp, Ltd., North Circular-road, N.W.2. No building contracts have yet been let.

Epsom.—SHOPS.—Mr. H. Weston, 6, Finsbury-square, E.C.2, is the architect for shops to be erected in Manor Green-road. No contracts have yet been settled

Finsbury. — REINSTATING. — Messrs. E. B. Holmes and Co., Ltd., of 157, Mare-street, Hackney, E.8, are reinstating damage caused by fire to cabinet works of Messrs. H. Schuman, Ltd., 69, Leonard-street. The architects are Messrs. Mark W. King and Sons, of 6, Holborn Viaduct, E.C.1.

Friern Barnet.—FLATS.—The surveyor to the U.D.C. is preparing plans for 50 flats in the south ward of the district. No contracts have yet been placed.

Greenford.—HALL.—Plans have been prepared by Mr. A. R. S. Blay, "Artavis," Mountview, Rickmansworth, for a block of buildings, comprising a billiards hall, a dance hall and two shops, etc. No contracts have been placed yet.

Hallam-street.—FLATS.—A block of flats is to be erected from plans prepared by Messrs. Marshall and Tweedy, FF.R.I.B.A., 4, Cavendish-place, Cavendish-square, W.1, on a site of Nos. 91 and 93 and 54-57, Devonshire-street, W.1. The demolition work is being carried out by Messrs. Henry Boyer, Ltd., Terminus Wharf, Paddington, W.2. The builders are Messrs. Kirk and Kirk, Ltd., 287, Upper Richmond-road, Putney, S.W.15.

Lewisham.—ALTERATIONS.—Plans are being prepared for alterations and additions to the depot, at Weston Hill, S.E.19, for the Express Dairy Co., Ltd., Tavistock-place, W.C.1. Mr. N. Smallwood, the company's own architect, has prepared plans.

Marylebone. — CHURCH. — Rev. W. N. Roche, 205, Marylebone-road, N.W.1, Rector of the Roman Catholic Church of the Rosary, has in view the erection of a new edifice upon a site in Marylebone-road and Crawford-street. No plans have been prepared or architect appointed yet.

North Kensington.—FLATS.—The Kensington Housing Trust, Ltd., 138, Portobello-road, W.11, are contemplating the erection of flats on the Dalgarno-gardens area. No plans have yet been passed for the scheme.

Norwood.—EXTENSIONS.—Messrs. F. A. Walters and Son, 28, Great Ormond-street, W.C.1, are the architects for extensions at St. Joseph's elementary schools, Central-hill, Upper Norwood, S.E. No contracts have yet been placed.

Perivale.—GARAGE.—A petrol service station is to be erected on a site in Western-avenue and Hanger-hill, for the Red and White Service Garage Co., of Wembley. The plans have been prepared by Mr. W. Smyth, proprietor of the company, who will also carry out the work by direct labour.

Ponders End.—HOUSES.—Messrs. Hilbery, Chaplin, Ltd., 4, Russell-parade, Golders Green, N.W.11, are the estate agents for proposed houses at Ponders End; 216 houses are proposed. The plans are by the company's own staff, and no contracts have yet been placed.

Romford. — HALL — Mr. E. Meredith, F.R.I.B.A., 7, Goodmayes-road, Goodmayes, is preparing plans for a new hall at Gidea Park, Romford, for St. Michael's Church. No contracts have yet been placed.

St. Marylebone.—BATHS.—The B.C. are proposing to build new public baths on the Shouldham-street housing site.

Stoke Newington. — HOUSING. — The B.C. has recommended the Housing Committee to prepare and submit to the Council a scheme for the erection of dwellings on the Lordship-terrace site. The committee has entered into further negotiations with Messrs. Clutton for the purchase of the site from the Ecclesiastical Commissioners.

Streatham.—REBUILDING.—A sum of £2,000 is to be expended on the reconstruction of the subsidiary buildings at the Lewin-road Baptist Church, S.W. The contract has been placed with Messrs. Dowsett and Jenkins, Ltd., 7, Sunnyhill-road, S.W.16.

Twickenham. — ADDITION. — A generous donation has been received by the governors of the St. John's Hospital, Amyard Park-road, for the erection of a new X-ray department. Nothing has yet been decided regarding the matter. The hospital's architects are Messrs. Brewer, Smith and Brewer, 11, The Green, Richmond.

Victoria-street. — ADAPTATION. — H.M.O.W. have placed a contract with Messrs. F. Troy and Co., Ltd., 194, Finchley-road, N.W.3, for adaptation as a new branch post office of 114, Victoria-street, S.W.1.

Walthamstow.—HOSPITAL.—The tender of Mr. F. J. Coxhead, 45, Bulwer-road, Leytonstone, E.11, has been recommended for a new maternity hospital at "Thorpe Coombe," Forest-road, E. The plans have been prepared by Mr. D. Furness, Borough Engineer and Surveyor of the T.C.

Wealdstone.—SHOPS.—Messrs. Bridge and Co., Ltd., 91, Effra-road, Brixton, S.W.2, have secured the contract for shops in the High-street and Gordon-road. The plans are by Messrs. Hillier, Parker, May and Rowden, 27, Maddox-street, W.1.

Wembley.—FACTORY.—A company called the Abbey Estates Development Co., Ltd., has been formed to lay out an estate at Mount Pleasant for industrial purposes. A large factory is to be shortly erected, for which plans have been prepared by Messrs. Lee and Lee, 94, High-street, Wembley. Contracts have not yet been let.

Wimbledon.—ALTERATIONS.—The "Swan" hotel, 91, The Ridgway, is to be altered. Plans are being prepared.

Woolwich.—HOUSES.—Messrs. Sykes and Pomfret, 8, Park-place, Eltham, S.E.9, have prepared plans for the development of an estate known as Forest Lodge estate, S.E. The builders are Messrs. J. Webb and Co., 35, Earlshall-road, Eltham, S.E.

Woolwich. — RECONSTRUCTION. — Messrs. Riggs and Remington, Ltd., Carteret House, Carteret-street, Westminster, S.W.1, have secured a contract from H.M. War Office for the erection of a sports pavilion and reconstruction of a cookhouse at Woolwich.

NEWS ITEMS

Dividends.

Twisteel Reinforcement, Ltd., announce the payment on January 1 of an 8 per cent. per annum dividend on the preference shares of the company for the six months ended December 31, 1932.

Messrs. E. Pollard and Co., Ltd., St. John-street, E.C.1, have paid a final preference dividend, making 7 per cent. for the year 1932.

A Graving Dock Contract.

Sir Robert McAlpine, Ltd., have secured the contract, valued at £200,000, for the construction of a 500 ft. graving dock at Wallsend-on-Tyne for Messrs. Swan, Hunter and Wigham Richardson. Employment, it is understood, will be found for 1,500 men.

Builders' Estates.

Mr. Thomas Davies, of Bryn, Pine Walks, Prenton, Birkenhead, Cheshire, builder, left £102,768, with net personalty £13,357; Mr. John Merrick, of Restholme, Glastonbury, Somerset, builder and contractor, left £16,338, and Mr. Robert Roberts, of Peterborough-road, Fulham, S.W., builder, left £16,563, with net personalty £4,340.

Patents and Designs Act.

Messrs. Gee and Co., patent agents, write to point out that the Patents and Designs Act which came into force on November 1, 1932, gives a period of three months longer (except where otherwise expressly provided) than previously for the following steps to be taken:—(*a*) Filing a complete specification after a provisional specification; (*b*) accepting a complete specification; and (*c*) sealing a patent (a longer period for sealing in certain circumstances); and is retrospective in respect of these steps. Thus, applicants for patents whose applications under the previous Acts have lapsed can still proceed if they can bring themselves within the extra periods allowed under the new Act.

Town Planning.

THE following town planning progress in in England and Wales for the month ended December 31, 1932, is reported:—

Scheme approved (Stage CC).—Yorkshire (West Riding): Bradford Town Council (Clayton Area).

Preliminary Statements approved (Stage BB).—Cheshire: *Alderley Edge U.D., *Bowden U.D., *Cheadle and Gatley U.D., *Handforth U.D., *Lymm U.D., *Wilmslow U.D., *Bucklow U.D.; Surrey: †Mitcham U.D.C. (No. 2).

Preliminary Statements received (Stage B).—Kent: Broadstairs and St. Peters U.D.C.

Resolutions received (Stage A).—East Sussex: Battle R.D.C., Rye R.D.C.; Hants: Ringwood and Fordingbridge R.D.C.; Staffs: Cannock R.D.C.

* Preliminary Statement submitted by North Cheshire Joint Committee.

† Omitted from previous (November) Statement.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1932.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Brick-layers.	Car-penters Joiners.	Plas-terers.	Slaters.	Plum-bers.	Pain-ters.	Lab-ourers.
Aberdare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Accrington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aldershot	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Alfreton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Alnwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Altrincham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashford (Kent)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ashington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ashton-under-Lyne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aylsham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Banbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Barnsley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barnstaple	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Barrow-in-Furness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Basingstoke	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bath	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bedford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Berwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bexhill	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Birkenhead	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Birmingham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bishop Auckland	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Blackburn	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackpool	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bognor Regis	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bolton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bradford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford-on-Avon	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Braintree	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bridlington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bristol	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromsgrove	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bromyard	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Bungay	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Burnley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Burton-on-Trent	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury St. Edmunds	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Buxton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cambridge	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Canterbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Cardiff	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Carlisle	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Chelmsford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Cheltenham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chesterfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chorley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cirencester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Clacton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Colchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Coventry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cranbrook	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Crewe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cromer	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Darlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Deal	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Denbigh	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Derby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Devizes	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Dewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Doncaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dorchester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Dorking	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Dovercourt	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Driffield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Droitwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dudley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Durham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
E. Glam. (Mon. Val.)	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ely	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Exeter	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Exmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Fakenham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Felixstowe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Folkestone	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Frome	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Glossop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gloucester	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Godalming	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Goole	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gosport	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grantham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gt. Yarmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Grimsby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Guildford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Halifax	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harpenden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Harrogate	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hartlepools	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harwich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Hastings	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hatfield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hednesford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Herne Bay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Hertford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hitchin	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hoddesdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Holt	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Huddersfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hull	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hunstanton	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Huntingdon	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Isle of Wight	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ipswich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Keighley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kettering	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Kidderminster	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
King's Lynn	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Lancaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leamington Spa	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Leeds	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leicester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leighton Buzzard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Lichfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Lincoln	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Littlehampton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Liverpool	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Llandudno	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Llanelly	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
London—								
12 m. radius	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/6½	1/2½
12-15 m. radius	1/7	1/7	1/7	*	1/7	1/7	1/6	1/2½
Loughborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lowestoft	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Luton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Macclesfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Maidstone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Malvern	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Manchester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Mansfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Margate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Market Harborough	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Matlock	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Melton Constable	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Melton Mowbray	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Merthyr Tydfil	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Middlesbrough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newark	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Newbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newcastle-on-Tyne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newcastle-u-Lyme	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
New Forest	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newmarket	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newport, Mon.	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Norwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Nottingham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nuneaton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Oakham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Oldham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Oxford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Paignton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Peterborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Pontypridd	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Preston	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ramsgate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Reading	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Redcar	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redditch	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Reigate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Retford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ripon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rochdale	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Rugby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Saffron Walden	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
St. Albans	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
St. Helens	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sawbridgeworth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Saxmundham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Scarborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sevenoaks	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Sheffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Shrewsbury	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sittingbourne	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Southampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southend-on-Sea	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
South Shields	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stevenage	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Stockport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stockton-on-Tees	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stoke-on-Trent	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stourbridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stourport	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stowmarket	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Stratford-on-Avon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stroud	1/4	1/4	1/4	1/4	1/4	1/4	1/3½	1/–
Sunderland	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Swaffham	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Swansea	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Swindon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Tamworth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Thetford	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Torquay	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Totnes	1/4	1/4	1/4	1/4	1/4	1/4	1/2½	1/–
Trowbridge	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Tunbridge Wells	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Uttoxeter	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Wakefield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Walsall	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Walsden	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Warminster	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Warrington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Warwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wells (Norfolk)	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Welwyn Gar. City	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
West Bromwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Weston-super-Mare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Weymouth	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Whitby	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wigan	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Winchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Windsor	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wisbech	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Wolverhampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Woodbridge	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Worcester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Worksop	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worthing	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wrexham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wycombe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wymondham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
York	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½

* The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st October, 1932, is 1/8½ per hour.

For Building Trade wages in Scotland, see page 152.

STANDARDISED NATURAL ASPHALTE

Formation of New Council.

A LUNCHEON was held at the Café Royal on Tuesday last, in connection with the recent formation of the Natural Asphalte Mine-Owners' and Manufacturers' Council. Mr. F. M. Bond, of the Limmer and Trinidad Asphalt Co., Ltd., presided, and among those present were the following:—Col. S. C. Marriott, of The Limmer and Trinidad Lake Asphalt Co.; Mr. J. W. Starkey and Mr. J. Faldo, of The Val de Travers Asphalte Paving Co., Ltd.; Mr. S. D. Clements, of The Ragusa Asphalte Paving Co., Ltd.; Mr. M. S. Mitchell, of The General Asphalte Co., Ltd.; Mr. C. W. Mathewman, of The Penmaemawr and Trinidad Lake Asphalte Co., Ltd.; Mr. H. F. Berry, of Highways Construction, Ltd.; Mr. C. R. Pomeroy, of The Western Trinidad Lake Asphalte Co., Ltd.; Mr. A. E. Nicholson, of The Neuchatel Asphalte Paving Co., Ltd., and Mr. G. J. Hancock, secretary, Natural Asphalte Mine-Owners' and Manufacturers' Council.

In the course of a speech, Mr. Bond said that with the development and wider use of mastic asphalte in building construction the leading asphalte companies had for some time been conscious that approved standards of quality of materials and of executive practice should be set up, in order that users of this class of asphalte, and particularly those who had the responsibility for specification, should have that measure of protection to which they were entitled. As a result, and following representations to the same effect which were made to the industry by architects, public bodies and others, discussions took place between a number of leading companies, with a view to exploring every avenue which might lead to the establishing of such standards.

It was felt that, unlike most building materials for which standard specifications had been prepared, asphalte was in a class alone, in that the asphalte company was not only the manufacturer of the material, but was generally also the contractor for its application. It was clear, therefore, that it would not be sufficient to prepare and standardise specifications governing its constituents and manufacture only, but that it would be necessary also for standards of executive practice to be set up.

After discussion, investigation and close technical research, unanimity had been obtained, and companies comprising many of those most experienced with that specialist material had been successful in agreeing upon and standardising specifications and methods of application, which were based on their joint experience, knowledge and resources. In order to implement those findings, and so that users of asphalte can take full advantage of them, it was realised that it would be necessary for an impartial body to be set up, on which all the companies who had undertaken those investigations would be represented, and the Natural Asphalte Mine-Owners' and Manufacturers' Council had therefore been formed. That Council would closely watch the interests of the architect, quantity surveyor, public authority, builder, and of all users of mastic asphalte, and was prepared to guarantee strict adherence to the standards it has set up by means of a warranty issued under seal.

The Council was, therefore, a body representative of the principal asphalte companies in the United Kingdom, and had been formed for the purpose of co-ordinating and standardising the manufacture and application of mastic asphalte for building construction in regard to raw materials, technical equipment, research and executive practice. The Council's primary object had been achieved and standard specifications had been drawn up governing the three main classes of mastic asphalte work: roofing, damp course and basement work and flooring.

It had been definitely established during the course of research and confirmed in practice, that only certain grades and blends of raw materials would give entirely satisfactory results (dependent to a large extent upon their geological formation and physical structure), but in the past, owing to the fact that the resources of raw materials available to the various companies represented on the Council were limited to the particular centres of production to which they had access, it was naturally not possible to combine the most valuable properties of each source into a single manufactured product.

In future the joint resources of raw materials, which included many of the best-known asphalte mines in the world, would be at the common disposal of all members, and the standardising of manufacture, according to the findings of the experts, had thus been made practicable. The sources of supply of natural material which would be utilised in the Council's specifications included the well-known mines at: Val de Travers, Neuchatel, Switzerland; the Seyssel Region, Bassin de Seyssel, France; St. Jean de Maruéjols, Gard, France; and native bitumen from the asphalt lake, Trinidad, British West Indies. These materials would be imported in a raw state and manufactured in Great Britain.

In order to assist architects and others in this connection, the Council had prepared an illustrated brochure, containing numerous diagrams, showing methods of construction in buildings employing the use of asphalte. In order to afford users of mastic asphalte a ready means of identification and also as a proof of authenticity, the Council has adopted a trade mark.

Mr. J. B. London, of the Lawford Asphalte Co., returned thanks to Mr. Bond for his able speech.

NEW CINEMAS

Bristol.—Work is to begin at once on the new super-cinema in Queen's-avenue, Clifton. The company responsible is the Queen's Avenue Cinema Co. Mr. W. H. Watkins, F.R.I.B.A., Sun-buildings, Clare-street, Bristol, is the architect, in association with Mr. Morgan Willmott, F.R.I.B.A., of 27, Park-place, Cardiff. The new cinema will seat 2,200, and the work will be carried out by Bristol contractors.

Galway.—Galway is to have an up-to-date cinema costing £18,000, seating 1,400. Work is to start immediately. Mr. Walter McNally is at the head of the new venture, and in addition is having the Empire, which he already controls in Galway, modernised.

Leeds.—T.C. approved plans for a cinema at the junction of Montreal-avenue and Church-lane for Mr. A. Cansfield.

Oban.—As the result of negotiations between Oban Cinema Co. and the new company recently formed, which acquired the old post office site in Argyll-square, where the second cinema house was to be built, a new arrangement has been made. The present cinema house company in George-street has acquired the ground and building rights from the new company, and will proceed shortly with the erection of the cinemas.

Southgate.—The U.D.C. has received plans from Mr. King for the lay-out of land in Bowes-road, opposite Natal-road, for the erection of shops and a cinema.

Victoria.—A scheme is afoot to erect a news-reel cinema in Victoria Station over and behind the entrance to the station in Buckingham Palace-road. The organisers of the scheme are British News Theatres, Ltd., of which Mr. Norman J. Hulbert is a director. Other information about this scheme was given in our issue of January 6.

Waterloo (Lancs).—Application was made to the Liverpool County Licensing Justices for a licence for a cinema to be erected on the site of Capenhurst, Crosby-road North, Waterloo, of which Mr. A. E. Shennan, 14, North John-street, Liverpool, is the architect. The plans have received the approval of Waterloo-with-Seaforth District Council.

Walthamstow.—The proprietors of the Regal Cinema, Hale End-road, E., have under consideration the reconstruction and enlargement of their building. The plans have been prepared by Messrs. Howes and Jackman, 10, Gray's Inn-square, W.C.1, but no contracts have been let yet.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JANUARY 25.

Birmingham.—Building.—Public convenience at corner of Summer-lane and Clive-passage, for T.C. H. H. Humphries, City E. and S. Dep. £2.

Caterham.—Offices.—For Caterham and Warlingham U.D.C. Clerk, Council Offices. Dep. £3 3s.

Cork.—Installation.—Of electric light in eye, ear and throat department of Cork County Home and Hospital, for South Cork Public Assistance Board. D. Egan, secretary, Boardroom, Douglas-rd., Cork.

Dennelme.—Convenience.—Public convenience in Parkinson-rd., for U.D.C. S.

Edinburgh.—Offices.—Offices at tramway depot, Westfield, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Hartlepool.—Houses.—17 houses in Hart-rd. and Hutton-st., for T.C. J. H. Miers, B.E. and S. Dep. £1 1s.

Killeagh.—Repairing.—Also painting dispensary residence at Killeagh, Co. Cork, for South Cork Public Assistance Board. D. Egan, secretary, Boardroom, Douglas-rd., Cork.

Knowle.—Villa.—Admission villa, with all incidental works, at Knowle Mental Hospital, near Fareham, Hants, for Hampshire Joint Mental Health Institutions' Committee. J. M. Sheppard & Partners, architects, 38, Bedford-pl., London, W.C.1. Dep. £5 5s.

Markinch.—Houses.—20, for T.C. A. D. Haxton, architect, Commercial-rd., Leven.

Newent.—Houses.—25 houses, for R.D.C. W. Francis, Building Surveyor. Dep. £2 2s.

Torquay.—Houses.—Rendering externally certain elevations of 44 houses on Windmill Hill housing estate. P. W. Ladmore, B.E. Dep. £2 2s.

Truro.—Residence.—Residence at Killiganoon, near Truro. A. J. Cornelius, F.R.I.B.A., architect, Truro.

JANUARY 26.

Havant.—Painting.—External of Town Hall, for U.D.C. S.

JANUARY 27.

Berwick-upon-Tweed.—Houses.—8 three-apartment houses in one block at Middle-st., Spittal, for T.C. G. R. Davidson, B.S.

Killinawas.—House.—House on lands of Killinawas, Co. Longford, Edgeworthstown, for Irish Land Commission. M. Deegan, secretary, Irish Land Commission, Upper Merrion-st., Dublin.

JANUARY 28.

Bristol.—Houses.—88 houses at Bedminster housing site; 22 houses at The Dings housing site; 12 houses at St. Anne's housing site; and one workshop at Bedminster housing site, for T.C. City Engineer, Housing Department, 51, Prince-st.

Tenby.—Houses.—10 non-parlour type houses in pairs on Lower Maudlins, for T.C. B. Morley, B.S. Dep. £2 2s.

Tredegar.—Rooms.—Relaying Rugby football field, together with new drainage system to same, and erecting dressing-rooms with shower baths, etc., at recreation ground. George P. Morgan, hon. sec., "Rydal," Avalon-terr., Tredegar, Mon.

JANUARY 30.

Cambridge.—Clinic.—In Auckland-rd., for T.C. B.S. Dep. £2 2s.

Cork.—Hospital.—At Bessboro', Blackrock, Cork, for the Order of Sisters of Sacred Hearts of Jesus and Mary. B. O'Flynn, B.E., M.R.I.A.I., architect, 60, South-mall, Cork. Dep. £5.

Cowes.—Housing.—12 semi-detached non-parlour type houses on Mill Hill site, for U.D.C. J. W. Webster, E. and S. Dep. £2 2s.

Dunmurry.—Residence.—Residence at Black's-rd., Dunmurry. W. D. and R. T. Taggart, architects, Scottish Provident Buildings, Belfast.

Kingsbury.—Sewer.—Laying of a 9 in. surface water sewer, approximately 260 yds. long, in Church-lane, for U.D.C. R. C. N. Newport, E. and S. Dep. £2 2s.

Paddington, W.2.—Tenements.—Brindley-st., for B.C. T.C., Town Hall. Dep. £1 1s.

Pocklington.—Houses.—Three blocks of four non-parlour houses in township of Pocklington, for U.D.C. J. Butterworth, S. Dep. £2 2s.

West Riding.—Building.—(1) Lay-out of playing fields and formation of asphalt tennis courts, and provision of tennis court surrounds, at Keighley new girls' grammar school; and (2) provision of wrought iron unclimbable fencing at playing fields of Maltby grammar school, for C.C. Education Officer, County Hall, Wakefield.

JANUARY 31.

Barnacre.—Demolition.—Taking down and removal of buildings used as offices and workmen's huts at Grizedale Lea reservoir, Barnacre, near Garstang, for Fylde Water Board. G. F. Atkinson, engineer, Head Office, Sefton-st., Blackpool.

Gillingham.—Houses.—136, for T.C. John L. Redfern, A.R.I.B.A., B.E. and S. Dep. £2 2s.

Henley-on-Thames.—Centre.—Alterations and additions to premises previously known as Victoria Hall, Greys-rd., to form a practical subject centre, for Oxfordshire C.C. T. O. Willson, Director of Education, New-rd., Oxford. Dep. £1 1s.

Middleton.—Houses.—26 houses, on site at Townparks, Midleton, for U.D.C. J. J. Bowen, M.R.I.A.A., Fermoy.

Nottingham.—Wiring.—Also fitting up of lighting points in houses situate in urban districts of Arnold, Carlton, Hucknall, and West Bridgford, and parishes of Edwalton, Gedling, Holme Pierrepont, Radcliffe-on-Trent, Ruddington, South Wilford, and part of Colwick, for T.C. City Electrical Engineer, Electricity Department, Talbot-st. Dep. £1 1s.

Southend-on-Sea. — Erection. — Of mortuary and works, for the County Borough. Town Clerk, Municipal Buildings. Dep. £2.

FEBRUARY 1.

London.—Building.—Above-ground convenience for both sexes at Old Town, Clapham, S.W.4, for Wandsworth B.C. B.E., 215, Balham High-rd., S.W.17

Upton.—Station.—Police station at Upton, near Pontefract, for West Riding C.C. West Riding Architect, County Hall, Wakefield.

FEBRUARY 3.

Brentwood.—Cottages.—For Essex C.C. County Architect, County Hall, Chelmsford. Dep. £1 1s. (to the County Accountant).

***Foxhall, Ipswich.**—Telephone Exchange.—For the Commissioners, H.M.O.W. Contracts Branch, Room 65d, 3rd Floor, King Charles-st., London, S.W.1. Dep. £1 1s.

FEBRUARY 4.

Burry Port.—Hall.—Institute for Burry Port Memorial Hall and Institute Committee. W. Griffiths & Son, architects, Falcon-chambers, Llanelly. Dep. £2 2s.

Droitwich.—Conveniences.—In Victoria-sq., for T.C. R. E. Hulse, B.E. and S. Dep. £2 2s.

East Ardsley.—Wiring.—For electric light of 12 houses in Main-st., East Ardsley, for Ardsley East and West U.D.C. F. A. Brown, S.

Oldham.—Houses.—386, Abbey Hills estate, for C.B. B.E. and S. Dep. £2 2s.

Ripon. — Building. — Bricklayer and builder, plumber, electrician and tiler, for work in connection with housing, for Masthouses, Ltd. N. Lush, A.M.Inst.C.E., Engineer to Co., Ure Bank.

Sedbergh.—Houses.—Three on Fairholme housing scheme, for R.D.C. A. Knewstubb, architect and chartered surveyor, St. Andrew's-chambers, Penrith.

FEBRUARY 6.

Mullingar.—Hospital.—New County Hospital at Mullingar, Co. Westmeath, for Westmeath County Board of Health. T. F. McNamara & Sons, architects, 5, Dawson-st., Dublin. Dep. £5.

***Thornham and West Rudham, Norfolk.**—Houses.—For the Docking R.D.C. J. A. Stoughton, Clerk to the Council, Fakenham. Dep. £1 1s. (cheque).

Willesden.—Fencing.—Wrought-iron fencing, gates and dwarf wall, at Kingsbury Cemetery, for U.D.C. F. Wilkinson, E. Dep. £5 5s.

Willesden.—Fencing.—Supply and erection of close-boarded oak fencing at Kingsbury Cemetery, for U.D.C. F. Wilkinson, E. Dep. £5 5s.

FEBRUARY 7.

Egypt.—Building.—Electric power station, for Ministry of Interior. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (A.X. 11599.)

Purbrook. — Junior Council School. — Clerk, The Castle, Winchester. Dep. £1 1s. (to Hampshire C.C.).

FEBRUARY 8.

Manchester.—Houses.—On Wythenshawe estate. Housing Director, Town Hall. Dep. £2 2s.

***Manchester.** — Houses. — Clayton (John Heywood-st.) estate. Housing Director, Town Hall. Dep. £2 2s. (to the City Treasurer).

FEBRUARY 10.

Durham.—Renovations.—Internal renovation of Shire Hall and Education Offices, for County Council. J. Merrett, C.S., 43, Old Elvet, Durham.

FEBRUARY 13.

Banbury.—Houses.—8 non-parlour, at Cropredy: 4 same type Hornton, and 4 same type Tadmarton; for R.D.C. A. Hunt, S., Castle-wharf.

Dingle.—Laundry.—New laundry and renovations at Dingle district hospital, for County Kerry Board of Health and Public Assistance. Winters & Buckley, consulting engineers and architects to Board, 27, Molesworth-st., Dublin. Dep. £5 5s.

Hemsworth.—Pavilion.—In Vale Head-park, for U.D.C. A. Wright, clerk. Dep. £1.

FEBRUARY 14.

Canvey Island.—School.—For Essex C.C. County Architect, County Hall, Chelmsford. Dep. £2 2s. (to the County Accountant).

FEBRUARY 18.

Tewkesbury.—Housing.—10 houses at Priors Park site, for T.C. W. Rider, B.S. Dep. £2 2s.

MATERIALS, etc.

JANUARY 25.

Bradford.—Limestone, etc.—For T.C. F. Marsden, City E. and S.

Hull.—Highway Materials.—For T.C. H. Hamer, City E.

Kidderminster.—Road Materials.—For R.D.C. A. S. Northover, S.

London.—Highway Materials.—For Chelsea B.C. W. R. Manning, B.S.

Welwyn Garden City. — Road Materials. — For U.D.C. Capt. W. E. James, E. and S.

JANUARY 26.

Sutton Coldfield.—Road Materials.—For T.C. P. Parr, B.E. & S.

JANUARY 27.

Belfast.—Builder's Materials.—For Electricity Committee. City Electrical E., East Bridge-st.

Kettering.—Road Materials.—For R.D.C. H. J. Parker, S.

Wood Green.—Road Materials.—For U.D.C. E. & S.

JANUARY 28.

Durham.—Highway Materials.—For C.C. W. J. Merrett, C.E. and S., 4, Old Elvet, Durham.

Farnborough.—Road Materials.—For U.D.C. J. E. Hargreaves, E. and S.

Frimley and Camberley.—Highway Materials.—For U.D.C. R. H. Porteous, E. and S.

London.—Road Materials.—For Paddington B.C. W. F. Abbiss, T.C.

Mitcham.—Highway Materials.—For U.D.C. S.

Newmarket.—Granite, etc.—For U.D.C. W. H. Eley, E. and S.

Slough.—Road Materials.—For U.D.C. A. Bromly, E. and S.

Somerset.—Tar, etc.—For C.C. E. Stead, C.S., Milton-rd., Weston-super-Mare.

JANUARY 30.

Bridgwater.—Road Materials.—For T.C. R. A. Watson, B.E. and S.

Gainsborough.—Highway Materials.—For U.D.C. S. Algar, S.

Hendon.—Road Materials.—For R.D.C. H. W. Rackham, S.

London.—Builders' Materials.—For Bethnal Green B.C. A. E. Darby, B.E. & S.

Middlesex.—Tar, etc.—For C.C. W. H. Morgan, C.E., Guildhall, S.W.1.

Middlesex.—Road Materials.—For C.C. W. H. Morgan, C.E., Guildhall, S.W.1.

West Suffolk.—Road Materials.—For C.C. E. H. Bond, C.S., Bury St. Edmund's.

JANUARY 31.

Acton.—Highway Materials.—For T.C. B.E.

Bedford.—Highway Materials.—For T.C. C. H. Blakeway, B.E. and S.

Cillingham.—Highway Materials.—For T.C. J. L. Redfern, B.E. and S.

Hertfordshire.—Tarmacadam, etc.—For C.C. A. E. Prescott, C.S., Hatfield.

London. — Highway Materials. — For Battersea B.C. E. Austin, T.C.

Trowbridge.—Chippings, etc.—For U.D.C. Geo. W. J. Clark, E. & S.

FEBRUARY 1.

Axminster.—Road Materials.—For R. and U.D.C.s. J. W. Pike, S., Council-chams., Axminster

Barnstaple.—Stone, etc.—For R.D.C. R. J. Ayers, Highway S., The Red House, Castle-st.

NO DATE.

Selby.—Road Materials.—For U.D.C. W. J. Kay, S., 5, New-lane.

ENGINEERING, IRON AND STEEL.

JANUARY 25.

Gower. — Water Supply. — Reinforced concrete tower at Three Crosses, in parish of Llanrhidian Higher, for R.D.C. L. M. Pugh, clerk, 14, Northampton-place, Swansea. Dep £2.

JANUARY 26.

Dursley.—Water Supply.—Reservoirs and extension of about 880 yds. of 2-in. or 3-in. mains at Kingswood, nr. Wotton-under-Edge, Glos., for R.D.C. Vernon S. Barnes, L.R.I.B.A., 1, King Street-parade, Stroud. Dep. £1 1s.

Inverness.—Reconstruction.—Also strengthening of Rigg, Stenscholl and Brogaig bridges in the Island of Skye, for C.C. R. Robertson, C.S., 26, Bank-st., Inverness.

Rugby.—Tower.—Water tower near town of Rugby, for Corporation. T. & C. Hawksley, civil engineers, 34, Old Queen-st., Westminster, S.W.1. Dep. £3 3s.

JANUARY 28.

Crediton.—Reservoir.—Covered service reservoir, pump house, fencing to reservoir site, and laying and jointing of approximately 1,000 lin. yds. of 4-in. and 3-in. cast-iron water mains, together with necessary valves, specials, etc., for U.D.C. S. Dep. £2 2s.

London.—Steelwork.—Steelwork for bridges, for South Indian Railway Co., Ltd. A. Muirhead, Managing Director, 91, Petty France, Westminster, S.W.1.

JANUARY 30.

Newton Abbot.—Drainage.—914 lin. yds. of stoneware pipe sewers and drains, ranging from 15 inches to 6 inches dia., and about 83 lin. yds. of cast-iron pipe sewers, 15 inches and 12 inches dia., together with manholes, gullies, and other incidental works, for U.D.C. F. W. S. Stanton, E., M.Inst.C.E., 5, Victoria-st., Westminster, S.W.1. Dep. £1.

South Africa.—Iron.—350 tons of hematite pig iron and 80 tons cold blast pig iron, for South African Railways and Harbours. Dept. of Overseas Trade, S.W.1. (Ref. G.X. 12173.)

FEBRUARY 6.

Grimsby.—Bridge.—Underline bridges to carry L. & N.E. Railway over Weelsby-rd., at Grimsby, for C.B. H. Gilbert Whyatt, B.E. Dep. £10 10s.

FEBRUARY 17.

Formby.—Refuse Destructor.—For U.D.C. E. K. Gollan, E. and S.

FEBRUARY 18.

Cairo.—Steel Plates.—For the Director-General, Mechanical and Electrical Department, Ministry of Public Works, Cairo. Inspecting Engineer to Egyptian Government, 41, Tothall-st., London.

FEBRUARY 22.

Loxden and Winsiree.—Water Supply.—Carting, excavating and laying of approximately 3 miles of 3-in. cast-iron pipe mains and appurtenant works in parish of Fingringhoe, and supply and delivery of approximately 100 tons of 3-in. cast-iron pipes and specials, for R.D.C. Sands & Walker, consulting engineers, Milton-chambs., Nottingham. Dep £2 2s.

ROAD, SEWERAGE AND WATER WORKS.

JANUARY 25.

Herne Bay.—Making-up.—Of Dering-rd., extending from Boulevard-rd. to Spenser-rd., for U.D.C. B. J. Wormleighton, E. & S.

Portsmouth.—Drainage.—Construction of approximately 3,800 lin. yds. of foul and surface water sewers, varying from 9 in. to 30 in. in dia., manholes, etc., in Cosham district of city, for T.C. R. J. Jenkins, City E. Dep. £5 5s.

Southend-on-Sea.—Sewers.—Soil and surface water sewers, new Leigh Station area, for C.B. R. H. Dyer, B.E. and S. Dep. £2.

Sutton and Cheam.—Drainage.—Also culverting of water course, Park Farm estate (western area), for U.D.C. Wm. Hedley Grieves, S. Dep. £3 3s.

JANUARY 26.

London.—Making-up.—Roadways and footways of Rockhampton-rd., Glennie-rd. and Canterbury-grove (portion), for Lambeth B.C. Osmond Catthn, B.E. Dep. £1 1s.

Sunderland.—Sewer.—Extension of Hendon Burn sewer, in Silksworth-lane, for distance of 344 yds., comprising 215 lin. yds of 51 in. dia. reinforced concrete cube sewer in trench, 10 ft. 6 in. deep; 99 lin. yds. of 27 in. dia. reinforced concrete cube sewer in trench, 10 ft. deep; 30 lin. yds. of 27 in. dia. reinforced concrete cube sewer in trench, 13 ft. deep; for C.B. B.E. Dep. £2 2s.

JANUARY 27.

Formby.—Sewer.—134 lin. yds. of 6 in. dia. concrete pipe sewer and reinstatement of roadway in Victoria-rd., for U.D.C. E. Kendrick Gollan, E. and S.

JANUARY 28.

Romford. — Making-up. — Of Knighton-rd., Kensington-rd., Norfolk-rd., Sherringham-av., for U.D.C. F. G. Beaumont, E. and S. Dep. £2 2s.

JANUARY 30.

Lindsey (Lincs).—Tar.—Refined tar and proprietary materials for surface spraying or dressing of roads, for C.C. A. G. Bradshaw, C.S., Newland, Lincoln.

Romford.—Making-up.—Of Astor-av., Burlington-av., Crowlands-av., Derby-av., and Lonsdale-av., for U.D.C. F. G. Beaumont, E. and S. Dep. £2 2s.

Surbiton.—Making-up.—In Minniedale, Surbiton, consisting of sewerage, carriageway and footpath works, for U.D.C. S. Dep. £1 1s.

Yeovil.—Making-up.—Of portion of Sandhurst-rd., for T.C. B.S.

JANUARY 31.

London.—Tarring.—Coating with tar or bituminous material about 56 miles of roads in the borough, for Islington B.C. B.E.

Northfleet.—Sewer.—470 yds. of 21 in. concrete tube sewer, including necessary manholes, etc., for U.D.C. J. A. Mitchell, S. Dep. £2.

FEBRUARY 1.

Barnstaple.—Maintenance.—Of certain roads, for R.D.C. R. J. Ayers, Highways S., Red House, Castle-st.

Olacton.—Sewer.—Laying approximately 250 lin. yds. of 9 in. stoneware pipe sewer, with manholes and other appurtenant works, in Thornbury-rd., for U.D.C. Wm. Aiston, S.

London.—Sewers.—36-in. dia. cast-iron and concrete pipe sewers in tunnel under Southern Railway between Hambro'-rd. and Eardley-rd., Streatham, S.W., for Wandsworth B.C. B.E., 215, Balham High-rd., S.W.17.

Newton Abbot. — Dressing. — Surface dressing roads, for U.D.C. S.

FEBRUARY 3.

Merton and Morden.—Road.—Roadmaking and other works in forming the extension of Seaforth-av., Merton, for U.D.C. G. Jerram, E. and S Dep. £1.

FEBRUARY 4.

Oldham.—Sewers.—Road and sewer works on Abbey Hills housing estate, for C.B. B.E. and S. Dep. £2 2s.

FEBRUARY 6.

Brigg.—Pipes.—2,650 yds. of 4-in. and 1,800 yds of 3-in. cast-iron pipes, sluice valves, hydrants and ancillary work, for U.D.C. Silcock & Simpson, engineers, 25, Victoria-st., Westminster. Dep. £3.

Hampton.—Main.—Laying and jointing of approximately 78 lin. yds. of 36-in. dia. main at depth of about 22 ft. cover, construction of concrete pit and contingent works, at Hampton Works, Lower Sunbury-rd., Hampton-on-Thames, for M.W.B. G. F. Stringer, Clerk of Board. Dep. £10.

St. Alban.—Making-up.—Of Lancaster-rd., for T.C. F. T. Negus, City E. and S., 38, St. Peter's-st. Dep. £1 1s.

Willesden.—Roads.—Approach road, soil and surface water sewers, and incidental works, at Kingsbury Cemetery, for U.D.C. F. Wilkinson, E. Dep £5 5s.

NO DATE.

Newcastle-on-Tyne.—Streets.—New streets at Walker, for Corporation. City Estate and Property Surveyor.

Public Appointments

JANUARY 28.

***Farnham.**—Clerk of Works.—For the U.D.C. Clerk, Council Offices.

CURRENT & PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Alfreton.—U.D.C. propose public baths at Somercotes Market Place.

Alnwick.—W. W. Tasker, F.R.I.B.A., 17, Claremount-rd., Newcastle-on-Tyne, architect to Northumberland C.C., been instructed to examine possibilities of converting Poor Law Institution to modern requirements.

Andover.—T.C. approved:—garages, Junction-rd., Palace Theatre Co.; 14 houses, Salisbury-rd., A. J. Colbourne, Building & Public Works Construction Co., County-rd., Swindon; 3 pairs villas in Weyhill-rd., T. Jenkins, Bristol.

Bannockburn.—Plans prepared for 14 houses. D. W. Glass, architect, Dumbarton-rd., Stirling.

Barnard Castle.—U.D.C. approved plans submitted by —, Beardall, of Liverpool, for rebuilding of 23, Horse Market.

Barnsley.—New church hall at Lund Wood, for Bishop of Wakefield's scheme. Paxton & Hill, architects, Leeds.

Belfast.—Corporation approved £105,000 building improvement scheme and extension of Belfast Mental Hospital, Purdysburn.

Belper.—Trustees of Belper Salem Methodist Church to erect a primary room to Sunday school.

Birkenhead.—M.H. notified Corporation of its approval in principle of 3 chapels in Corporation's new cemetery at Landican.

Blyth.—T.C. to be asked by Housing Committee to sanction further 200 houses on South Farm estate.

Bolton.—T.C. propose technical college in Manchester-rd.

Boston.—T.C. approved £5,025 scheme for alteration and modernisation of Assembly Rooms, and are to make application to Ministry for sanction to loan.

Bradford.—Public Assistance Committee propose extensions to casual wards at institution to provide 20 additional beds at £1,200.

Bridlington.—T.C. to build entertainment hall, open-air bandstand, open-air swimming baths, and to reconstruct north side of Bridlington.

Bromley.—R.D.C. approved: 6 pairs of houses, Hayes-lane and road No. 10, Hayes Place estate, Henry Boot & Sons, Ltd.

Cardiff.—City E. estimated roads and sewers for proposed 200 new houses at £7,750.

Carlisle.—T.C. approved:—8 houses, London-rd., J. Millar, per Benwell & Slack; office and buildings, Milbourne-st., Border Engineering Contractors, Ltd.

Carrenshore.—Plans prepared for 16 dwelling houses on new site. Wilson & Sait, architects, Station-rd., Grangemouth.

Caterham and Warlingham.—U.D.C. approved:—addition to nurses' home block, Browning Bethany Homes, Robert Browning Settlement; hall and canteen, High-st., Unemployed Welfare Committee; lay-out new road, Ringwood-sq., Hamsey Green, and 72 houses, A. Hartley; 6 lock-up garages, Townend, W. J. Hewer.

Chesterfield.—M.H. sanctioned housing scheme by Corporation.

Chipping Norton.—R.D.C. to build 10 non-parlour cottages at Tackley, 6 at Stonesfield and 6 at Coombe, and to ask for sanction from M.H. to schemes.

Congleton.—Housing Committee decided to select Rood Hill site for 50 houses.

Darlington.—It is proposed to build church for St. Mary's Parish, Harrowgate Hill. Rev. A. H. Norris, vicar. Architect not appointed.

Darlington.—T.C. approved:—J. E. Chilton, 8 houses, Hollyhurst-rd.; Cayley & Jarvis, 17 houses, Eldon-st.; Borough Surveyor, 6 houses, Sanderson-st.; Borough Surveyor, 68 houses, Hundens-lane.

Derking.—U.D.C. approved:—12 semi-detached houses, Pippbrook Mill estate, F. E. Standen.

Dudley Hill.—J. A. Dobson, builder, 3, Tong-st., proposes 26 houses in Harry-st.

Ealing.—Plans passed by T.C.:—R. Costain & Sons, Ltd., 7 and 8, Norfolk-st., Strand, W.C.2, 368 houses, on part 7 of the Sudbury Hill estate; J. M. Wilson, architect, St. Quivox, Hayes, 160 houses and 7 shops, on part 8 of the Perivale estate, for Wonder Homes, Ltd.; Greenford Estates, Ltd., Coston's-lane, Greenford, 37 blocks (156 flats), on part 3 of Greenford Hall estate; R. Lancaster & Sons, Ltd., 30, Ealing-rd., Wembley, 28 houses at Priory-gardens and Rydal-crescent; and 12 shops at North Circular-rd.; W. Gradwell & Co., Ltd., Farnham-rd., Slough, 43 houses at Russell-rd. and Clauson-av.; A. E. Murdoch (builder), estate office, Dawlish-av., Perivale, 13 houses, Tavistock-av.; R. A. C. Churchward, architect, 12 Victoria-st., S.W.1 (for A. E. Goodhew), 20 houses, Ruislip-rd.; London and Provincial Building Co., Estate Office, Lynwood-rd., W.5, 10 houses, Lynwood-rd.; R. Fielding & Son, Blackpool, 9 houses, Bideford-av.; R. Fielding & Son, Southall Park estate, Southall, 10 houses, Westvale-ter., Horsenden-lane; Percy Bilton, Ltd., 113, Park-st., W., factory at Bideford-av., for Alderman Silk Co.; S. H. West, architect, 40, The Broadway, W.5, boiler room, for Arrow Coachworks, Ltd., Boston-rd.; R. A. R. Blay, architect, Mount View, Rickmansworth, dance hall and billiards saloon, Ruislip-rd.; E. E. Farrant, architect, 6, Eriesmere-gardens, West Ealing, W.13, hall at Green Man-passage, for Miss E. S. Shimwell.

Eccles.—T.C. approved plans for completion of St. Mary Magdalene's Church for parochial council.

Gateshead.—T.C. approved:—L. Ather, 8 houses at Back Enfield-rd.; T. S. Armstrong, shops at Wrekenton-row, Wrekenton; J. Watson, 12 flats in 3 blocks of 4 flats each at Kinfauns-terrace, Low Fell; Sadler Bros. (Builders), Ltd., 6 pairs of semi-detached villas at Denewell-av. and Cleasby-gardens; trustees, additions and alterations to High West-st. Methodist Church.

Gateshead-on-Tyne.—Bensham Motor Co., Ltd., Bensham-rd., propose to extend garage, but have not yet placed contract.

Gillingham.—T.C. approved: 11 houses at Herbert-rd., Rainham, T. Ballard.

Great Yarmouth.—T.C. approved:—10 houses, Burgh-rd., B. G. Beech.

Haworth.—U.D.C. propose showroom for gas-works and electricity departments in Mill Hey.

Hebburn-on-Tyne.—U.D.C. approved plans submitted by W. G. Coulson for hotel at corner of Black-rd. and Victoria-rd. East. Architects, J. H. Morton & Son, Martins Bank-chams., South Shields.

Hessle.—U.D.C. decided to support amended Humber Bridge proposals.

High Wycombe.—R.D.C. approved:—F. Longworth, 12 houses, Summerleys-rd., Princes Risborough.

Ilkley.—£6,000 scheme for dealing with sewage from parish of Middleton, Ilkley, and including suspension footbridge on reach of Wharfe known as Crum Wheel, formed subject of M.H. inquiry.

Keswick.—Council to submit plans to M.H. for houses to be erected at Heads-lane clearance area.

Kidsgrove.—U.D.C. received M.H. approval to consider application from Council for approval of suitable site for further working-class dwellings.

Leeds.—Rufus Sanderson, Ltd., to reconstruct premises in Commercial-st.—Tenders to be invited for factory, warehouse and offices at Lupton-av., off York-rd., for C. & M. Sumrie, Ltd. Plans by C. Castelow, architect, Park-row.

Leicester.—M.H. sanctioned loan for new bus garage for Corporation Tramways and Omnibus.

Llanfairfechan.—U.D.C. approved plans for sanatorium of Governors of St. Winifred's School.

London (Fulham).—B.C. recommend application to Electricity Commissioners for extension of sanction to borrowing of £33,406 for acquisition of property of Lewis & Lewis, Ltd., for extension of Council's generating station.—Application to be made to Electricity Commissioners for extension of site of generating station in Townmead-rd. by purchase of leasehold premises known as "Evos Wharf."

London (Lewisham).—B.C. approved:—M. Holmes & Co., 6 houses, Como-rd.; H. Macintosh, 25 houses, Breckley-grove.

Manchester.—Plans approved by Corporation:—A. Jackson, Dargle-rd., Sale, 8 houses, Rowan-av., Baguley; Sparke & Stephens, Ltd., Manchester-rd., Chorlton-cum-Hardy, 9 houses and 3 shops and houses on Cundiff-rd., 6 houses, Stratton-rd., Woodside-rd. and Egerton-rd., Chorlton-cum-Hardy, also 4 shops and houses and 2 houses on Manchester-rd.; W. R. Parkinson, Holly-villas, Northenden-rd., Sale, 8 houses on Yew Tree-rd., Withington; Lords Estates, Ltd., Wallshaw-st., Oldham, 29 houses on Longley-lane, Northenden; E. L. Doyle, 15, Crumpsall-lane, Crumpsall, 11 houses, Holland-rd. and Wilton-rd., Crumpsall; W. Meredith, 90, Birchfields-rd., 9 houses on Old Hall-lane Rusholme.

Meanwood.—Tenders invited for reconstruction of shop premises for banking for Yorkshire Penny Bank, Ltd., at Stonegate-rd. Plans by Bank Architects' Dept., Infirmary-st., Leeds.

Middlesbrough.—T.C. approved:—34 houses, on building land, Bishop-st., Arne-st., and Corder-st., Newport, estate of Cleveland Trust, for Stephen Coates, Ltd.

Middleton.—Corporation propose baths at Suffield-st.

Morecambe.—Corporation propose alterations to premises at Morecambe-st. to provide a library, gas showrooms and court house. B.S.

Newsham.—It has been decided to proceed with alterations to premises to provide bakery for Blyth Co-operative Society. Tenders being invited. Plans by C.W.S. Architects Dept., 90, Westmorland-rd., Newcastle-on-Tyne.

North Shields.—Square Building Trust, Ltd., North Shields, decided to change site of 24 houses to erect from Coach-lane to a site facing Howdon-lane. Architect, A. K. Tasker, Trinity-bldgs., Newcastle.

Orpington.—P.C. approved: 5 pairs of houses and 1 pair of bungalows, Littlejohn-rd., E. O'Sullivan (Kenley), Ltd.; 10 pairs of houses in Orpington by-pass, Blatcher & Turner; 6 pairs of houses, Repton-rd., Blatcher & Turner.

Portadown.—Armagh County Council to ask Government loans of £19,000 for central public elementary school, and 9,000 for reconstruction of Portadown technical school.

Portsmouth.—T.C. approved:—G. Hellyer & Son, owners, Geo. Peters & Co., Ltd., rebuilding off-licence premises, Kingston-rd. and Buckland-st.; Hipperson & Son, owners, Central Electricity Board, transformer sub-station, Crown-st.; E. A. G. Wright, 8 houses, Northern-parade; Portsmouth and Brighton United Breweries, Ltd., public-house, Cobden-av. and Westover-rd., and public-house, Moneyfields-Redcar-avs.; also public-house premises Northern-parade, and hotel premises, London-rd., Hilsea; Southsea Development Co., Ltd., winter gardens, Southsea-terrace.

Reddish.—Members of Congregational Church propose church in Gorton-rd.

Rotherham.—T.C. approved plans for 34 houses, Moor-lane and Bryon-drive, A. V. Hopkins.

Rothwell (Yorks).—Tenders invited for Methodist church at Leeds-rd., Newton Hill, for trustees. Plans by Dinsley & Moss, architects, Chorley.

Runcorn.—U.D.C. on receipt of sanction, to make further application to Ministry for permission to borrow £3,000 for block of 7 houses in Dukesfield district to face Brackley-st. also to apply to Ministry for sanction to borrow £2,200 for 5 houses on Dover-st. site, and further sum of £450 for house in Perry-st.

Sandbach.—Following inquiry into application of Council to borrow money for cemetery site, chapel, and superintendent's house, M.H. sanctioned borrowing of £1,760 for land, and £667 for superintendent's house.

Sawbridgeworth.—U.D.C. approved:—6 pairs of cottages, Forebury estate, Mrs. N. Pyle.

Sheffield.—Joseph Rodgers & Sons, Ltd., 6, Works Pend Hill, propose rebuilding part of premises after fire. Plans by J. Mansell Jenkinson, of Chapman & Jenkinson, Norfolk-row.

Southampton.—T.C. approved:—7 houses, Coxford-close, for H. C. Ulph, Weston, Burnett & Thorne; 9 houses, Stanton-rd., and 6 houses, Claremont-crescent, for A. E. Jukes, Weston, Burnett & Thorne.

South Mimms.—R.D.C. approved: 14 semi-detached houses, Mutton-lane, Avellance Building Construction Co., Linster.

South Shields.—T.C. approved:—P. W. Newby, for Wm. Mawcus & Son, 20 bungalows, Central-av. and Central-gardens.

Sowerby Bridge.—Council approved:—11 houses, Parkfield estate, Lower Brockwell-lane, Ramsden, Berry & Whiteley.

Stafford.—T.C. approved scheme providing for alteration of Guildhall and Market entrance, at £18,000.—Plans passed:—12 houses, Tixall-rd., T. B. Follows.

Stockton-on-Tees.—J. P. Wakeford, B.E., been instructed to take out plans and estimates for reconstruction of Cattle Market.

Stretford.—U.D.C. to consider erection of convenience at Brook's Bar in conjunction with Manchester T.C.—Architect submitted drawing showing proposed lay-out of town hall site, including boundary walls and fencing, provision of trees, lawns and ornamental garden.—Plans passed: 8 houses, Seymour-grove, for Smith & Allcock; conversion to flats, 592-4, Stretford-rd., and 1-3, Birch-av., Residential Flats, Ltd.; conversion to flats, 608, Stretford-rd., U.D.C.; office extension, Trafford Park-rd., N. Kilvert & Sons, Ltd.

Stroud.—R.D.C. instructed clerk to negotiate for purchase of portion of Holloway's factory in John-st. and Union-st., for site for new offices.

Sunderland.—M.H. sanctioned £76,440 repayable for 84 houses at Commercial-rd., 24 houses at West Moor-rd., and 154 on Marley Potts estate.—T.C. agreed to convert "Cottage Tavern" in Hopper-st. into accommodation for three tenants at £218.—Health Committee proposes convenience in Margaret Thompson-pk. at £700. T. P. Collinge, B.E.—Milburn & Co., 17, Fawcett-st., prepared plans for alterations to "Minerva Hotel" for W. B. Reid & Co., Newcastle.—W. B. Reid & Co., Leazes, Upper Claremount, Newcastle, to carry out alterations to "White House" hotel. W. & T. R. Milburn & Co., 17, Fawcett-st., architects.

Swansea.—C.B. approved: Rebuilding "Red Cow" public-house, Carmarthen-rd. Mrs. S. Thomas.

Taunton.—T.C. approved slum clearance scheme involving demolition of 60 houses, at present accommodating 228 persons. Alternative accommodation in form of Council houses will be provided in advance of displacements.

Turriff.—Department of Health for Scotland authorised acceptance of tenders amounting to £9,928 8s. 7d. for 4 two-apartment flats at Castle-st., 16 three-apartment flats, 2 three-apartment two-story cottages, and 8 four-apartment flats at Hillcrest West.

Uxbridge.—U.D.C. approved:—Woodcroft-crescent, Hillingdon, 12 houses, Palace Houses, Ltd.; Long-lane, Hillingdon, 44 houses, G. Hooper; Oakleigh-rd., Hillingdon, 20 houses, T. Blade.

Wallsend-on-Tyne.—Plans for alterations to club premises of Constitutional Club, High-st. West, been approved by T.C.—T.C. approved plans submitted by C.W.S. Architects' Dept., 90, Westmorland-rd., Newcastle, for garage and mess rooms in North-rd. for Co-operative Laundries, Ltd.

Warrington.—Corporation propose 146 houses on Bewsey and Westy-lane estates. B.S.

Wellingborough.—U.D.C. received M.H. sanction borrowing of £2,442 for purchase of land for housing purposes.—Sanction of M.H. to borrowing of £2,442 for acquisition of site been received.—Council decided on 150 houses.

West Hartlepool.—B.E. prepared plans for 17 houses in Hart-rd. and Harton-st. Tenders invited.

Whickham.—Contract not yet been let for 7 houses in flats for R. Finn, Winchester-st., South Shields, on north side of Wellington-rd. J. W. Hanson & Sons, 18, Eldon-sq., Newcastle, architects.

Wolverhampton.—Walker, Lloyd & Hill, Darlington-st., propose to develop Aldersley estate for houses.

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*See also List of Contracts, Competitions, etc.

***** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by enquiry

BRICKS, &c.

Per 1,000 Alongside, in River Thames, up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	2 11 3	Flettons, B'flln'se	3 5 3
Flettons at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose	9 15 0
		Blue Wire Cuts	7 5 0

White Midhurst Facing Bricks (delivered London site) 5 0 0
"Phorpres" Whites (do.) 3 17 3
"Phorpres" Rustic Facing Bricks, delivered Central London ..... per 1,000 3 12 3
Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End	31 10 0
		Splays and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½" " "	1 8	4" " "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup.	3 3	3" per yd. sup.	3 10
2½" " "	3 7	4" " "	4 4

HEMPSTEAD—KEYED TWO SIDES.

2" per yd. sup.	3 3	3" per yd. sup.	3 9
2½" " "	3 6	4" " "	4 3

	s. d.	
Thames Ballast	6 6 per yd.	delivered 2 miles radius Paddington.
Pit Ballast	5 6 " "	
Pit Sand	7 0 " "	
Washed Sand	7 6 " "	
¾ in. Shingle	6 6 " "	
¾ in. Broken Brick	10 6 " "	
Pan Breeze	7 6 " "	

CEMENT.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test	
In Jute Sacks (11 to ton)	£2 4 9
In Paper Bags (20 to ton)	2 6 0

Colorcrete No. 1 & 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) 20/- per ton above Portland Cement Price.
"Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 190/- per ton.
Alongside Vauxhall in 80 Ton Lots

Jute Sacks (11 to ton)	1 17 9
Paper Bags (20 to ton)	1 19 0
Ferrocrete per ton extra on above	0 7 6
Vitrocrete per ton extra on above	0 7 6

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months, carriage paid.

Super Cement (Waterproof) Paper Bags free	3 16 0
Roman Cement	6 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0

PLASTER.

Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	4 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair ..... per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.
Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube .... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station, per ft. cube .. 2 3
Delivered free on rail Nine Elms, S.R. per ft., cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road waggons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE—

	s. d.
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb.	14 0
Sawn two sides	22 6
Sawn, three or four sides	27 6

CHILMARK—RANDOM BLOCK— s. d.
At Nine Elms, per ft. cube 3 11

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station London.

6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super	5 6
6 in. rubbed two sides, ditto ..... "	6 0
3 in. sawn two sides slabs (random sizes) "	2 3½
2 in. to 2½ in. sawn one side slabs (ransom sizes) ..... "	1 8½
1½ in. to 2 in. ditto ..... "	1 3½

HARD YORK—
Delivered at any Goods Station, London.

Scappled random blocks ..... Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super	5 1½
6 in. rubbed two sides, ditto .... "	6 1½
4 in sawn two sides slabs (random sizes) "	3 1½
3 in. ditto ditto "	2 8
2 in. self-faced random flags .... Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£23 10	3 × 6	£17 10
4 × 9	22 10	3 × 11	19 10
4 × 8	21 0	2 × 11	19 10
4 × 7	19 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11 ..... £22 10	1 × 9 ..... £21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅞	16/-	1¼	25/-
⅞	17/-	1½	27/6
1	20/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	21/-
1¼	26/-
1½	27/6
ins. BATTENS.	s. d.
¾ × 2 ..per 100 ft.	2 6

MATCHING (BEST).

Inches.	per sq.
¾	16/-
1	18/6
1	22/6
SAWN LATHS.	s. d.
Per bundle	2 3

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

First quality, slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	25 0 0	18 by 10 ..	15 12 6
22 by 12	25 0 0	18 by 9 ..	13 15 0
22 by 11	22 10 0	16 by 10 ..	13 10 0
20 by 12	22 0 0	16 by 8 ..	10 7 6
20 by 10	19 7 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£4 7 0
ditto hand-made ditto	5 0 0
Ornamental ditto	5 8 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
" Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅝ in. to ½ in.	10 15 0
⅜ in.	11 0 0	⅝ in. to 2¾ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ½in. to 6in.	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ½in. to 6in.	Standard Fittings Sizes ½in to 6in.	Standard Flanges Sizes ½in. to 6in.
	%	%	%	%
Gas	65	52½	57½	70
Water ..	61½	48½	52½	65
Steam ..	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	11d.	1/5	5d.
3½ in.	11½d.	1/7	5d.
4 in.	1/0½	1/9	5d.
4½ in.	1/1½	2/-	6d.
5 in.	1/5	2/2	8d.

O.G. GUTTERS.

3 in.	1/1	1/11	5d.
3½ in.	1/2	1/11	5d.
4 in.	1/2½	2/-	5d.
4½ in.	1/4	2/4	6d.
5 in.	1/6½	2/8	8d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches. stock angles.
2 in.	1/3½	1/9	2/7
2½ in.	1/4½	2/-	3/1
3 in.	1/8½	2/6	3/9
3½ in.	2/1½	3/-	4/4
4 in.	2/5	3/7	5/3

Connections—50 per cent. off above prices.
Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Bends, stock Pipe, angles, stock angles.	Branches. angles.
	s. d.	s. d.
2 in. per yd. in 6 fts.	1 11	1 6½
2½ in. "	2 3½	1 8½
3 in. "	2 4½	1 10½
3½ in. "	2 7	2 4
4 in. "	2 11	2 7½

	Bends, stock Pipe, angles, stock angles.	Branches. angles.
	s. d.	s. d.
	1 11	1 6½
	2 3½	1 8½
	2 4½	1 10½
	2 7	2 4
	2 11	2 7½

	2	9½
	3	3
	3	9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock angles.	Branches. stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths cwt. qr. lbs.	3 4	4 3	6 8
4 in. "	1 1 20 ..	4 7	5 2	8 10
5 in. "	1 2 22 ..	6 0	9 0	14 3
6 in. "	2 0 6 ..	6 6	10 11	18 1

Gaskin for jointing 41/- per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON—			
Common bars	10 10 0	to	11 0 0
Staffordshire Crown Bars—Good merchant quality	10 15 0	to	11 10 0
Staffordshire Marked Bars	14 0 0	..	15 0 0
Mild Steel Bars	9 10 0	..	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 0 0	..	9 0 0
Hoop iron, basis price	11 0 0	..	12 0 0
" Galvanised	27 0 0	..	28 0 0
Soft Steel Sheets, Black—			
Ordinary sizes, to 20 g.	11 0 0	..	11 10 0
" " " 24 g.	12 0 0	..	13 0 0
" " " 26 g.	14 0 0	..	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13 10 0	..	14 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14 10 0	..	15 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17 10 0	..	18 10 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 0 0	..	14 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	14 10 0	..	15 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0	..	17 10 0
Sheets, Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	18 0 0	..	19 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	20 0 0	..	22 0 0
Best Soft Steel Sheets, 26 g.	21 10 0	..	23 0 0
Cut Nails, 3 in. to 6 in.	15 0 0	..	16 0 0
(Under 3 in. usual trade extras.)			

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

	s. d.
Seamless Copper tubes (basis) ..... per lb.	0 9
Strong sheet ..... "	0 10
Thin ..... "	0 11
Copper nails ..... "	1 0
Copper wire ..... "	0 11

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. **Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information**

PRICES CURRENT OF MATERIALS—*(contd.).*

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in. ¾ in. 1 in.
30/- 60/- 118/6 per doz.

CAPS AND SCREWS.

1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
7/6 11/- 17/- 29/- 36/- 63/- per doz.

BRASS SLEEVES.

1¼ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

½ in. ¾ in. 1 in. 1½ in. 1½ in.
35/- 56/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH GRASS CLEANING SCREW.

1¼ in. 1½ in. 2 in. 3 in.
8 lbs. P. traps.... 33/- 41/- 56/- 101/- per doz.
8 lbs. S. traps.... 35/- 45/- 66/- 126/- ,,

TIN.—English Ingots, 1/8 per lb. SOLDER.—Plumbe'rs 9d., Tinmen's 10d., Blowpipe 11d. per lb.

LEAD, &c.

	£	s.	d.
(Delivered in London.)			
LEAD—Sheet, English, 4 lb. and up	19	10	0
Pipe in coils	20	0	0
Soil pipe	23	0	0
Compo pipe	23	10	0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 4s. per cwt. extra, and over 3 cwt. and under 5 cwt., 2s. 6d. per cwt. extra. Cut to sizes 4s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton £10 0 0

PAINTS, &c.

		£	s.	d
Raw Linseed Oil, in pipes.....	per gallon	0	1	9
,, ,, ,, in barrels	,,	0	1	11
,, ,, ,, in drums	,,	0	2	2
Boiled ,, ,, in barrels	,,	0	2	3
,, ,, ,, in drums	,,	0	2	5
Turpentine, in barrels	,,	0	5	6
,, in drums (10 galls.)	,,	0	5	8
Genuine Ground English White Lead, per ton		45	0	0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/0 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered £ 63 s. 0 d. 0

Red Lead, Dry (packages extra) .. per ton	34	0	0
Best Linseed Oil Putty ..... per cwt.	0	13	6
Size. XD quality ..... fkn.	0	3	0

VARNISHES, &c.

		Per gallon.		
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	6
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting.....	ditto	1	0	0
Hard Drying Oak.....	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent).....		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Culrass Black Enamel.....		0	7	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft.
15 oz. fourths.. 2½d.	32 oz. fourths.....	6d.
15 ,, thirds .. 2¾d.	32 ,, thirds	8d.
21 ,, fourths .. 3½d.	Obscured Sheet, 15 oz...	3½d.
21 ,, thirds .. 3¾d.	,, ,, 21 oz...	4¼d.
26 ,, fourths .. 4d.	Fluted, 15 oz. 6½d., 21 oz.	9d.
26 ,, thirds .. 5½d.	Em'lld,15 oz. 4¼d., 21 oz.	8d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
Rolled plate ¼ in.	4½d.
Rough rolled ⅜ in.	5½d.
Rough rolled ½ in.	5½d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	5½d.
Ditto. tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

	Per foot. s.	d.
"VITA" GLASS.		
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet.....	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide.....	2	6

NEW BUILDINGS IN SCOTLAND

Edinburgh. — BUNGALOWS. — The Dean of Guild Court has granted the following:—James Miller—34 houses at Abercorn-crescent; Neaves, Smith and Sime, 24, Hillside-crescent—three bungalows and three garages at Queensferry-road, Barnton.

Inverness. — IMPROVEMENTS. — Inverness-shire and Inverness Councils have agreed to a scheme, costing about £30,000, for improving Castle Hill, which was damaged by a recent landslide.

Lanarkshire. — HOUSES. — The representations of the C.C. to the Scottish Department of Health for the approval of the erection of 350 subsidy scheme houses have been refused, and, instead, the Department have approved of 262 houses.

Musselburgh.—SWIMMING POOL.—The T.C. have called for plans and a statement of probable cost of a proposed public swimming pool at Fisherow Links, and the matter is now in the hands of the Burgh Surveyor.

Paisley. — HOUSES. — The Department of Health have approved of two new housing schemes in Paisley for the erection of 500 houses. One of the schemes is at Barterholm and the other at Gallowhill. At the former site there is to be 126 houses of two apartments, 174 of three, and 54 of four apartments. At Gallowhill the figures suggested were 94 of two apartments, 136 of three, and 42 of four.

Rothesay.—HOUSES.—The T.C. has accepted a recommendation from the Public Health Committee to build forty houses on a site at Ballochgoy.

NEW COMPANIES

The particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

ARTHUR E. EGGLETON & Co., LTD. (271,660). Registered December 30. 80, Keston-road, Thornton Heath, Surrey. Builders' merchants, etc. Nominal capital, £500.

W. TAYLOR & SON (CAVERSHAM), LTD. (271,750). Registered December 31. 16, Bridge-street, Caversham. Builders, contractors, etc. Nominal capital, £500.

COPE & Co., LTD. (271,706). Registered December 31. 5, Bury-street, New Oxford-street, W.C.1. Tile fixers and merchants, etc. Nominal capital, £4,500.

NALC Co., LTD. (271,732). Registered December 31. To acquire, hold and manage any estates, lands and buildings; to carry on business as merchants and dealers in building materials, etc. Nominal capital, £150,000. Sir Alexander B. T. Cayzer, Bt., Roffey-park, Horsham.

W. S. EGLEN, LTD. (271,795). Registered January 2. 65-68, Merchants' Exchange, Cardiff. Builder and contractor. Nominal capital, £2,000.

THAMES VALLEY BALLAST Co., LTD. (271,792). Registered January 2. 77-79, High-street, Watford. Sand and ballast merchants, etc. Nominal capital, £1,000.

RIDGEWELL & HARRIS, LTD. (271,741). Registered December 31. 99, Little Albany-street, N.W.1. Builders, etc. Nominal capital, £500.

D. STEWARD & Co., LTD. (271,709). Registered December 31. Builders and building contractors, etc. Nominal capital, £100. A. G. Grimmond, Rapallo, Clarence-road, Hersham.

E. C. KESTEVEN, LTD. (271,711). Registered December 31. Slater, tiler and merchant. At Nippet-lane, Burmantofts, Leeds. Nominal capital, £3,000.

GEORGE KEETCH & SONS, LTD. (271,674). Registered December 30. St. Peter's Works, De Beauvoir-road, N.1. Builders, etc. Nominal capital, £5,000.

FRANK FELCE, LTD. (271,611). Registered December 28. Rectory-road, Rushden. Heating and ventilating engineers, etc. Nominal capital, £500.

LINDSAY BUILDING Co., LTD. (271,624). Registered December 28. 27, Fetter-lane, E.C.4. Builders, etc. Nominal capital, £1,000.

PATENTS

APPLICATIONS PUBLISHED.

384,310.—J. M. Morris: Construction of cold-storage chambers.

384,330.—British Thomson-Houston Co., Ltd., and R. Adkins: Methods of securing metal to porcelain.

384,347.—W. C. Tanner: Valve-discharge flushing-cisterns.

384,411.—A. C. Marshall, and Steel Scaffolding Co., Ltd.: Parts for use as transoms or putlogs in scaffolding.

384,490.—C. H. Burrows: Devices for controlling slidable windows.

384,491.—J. H. Roethel: Window-control mechanism.

384,493.—Brookes and Adams, Ltd., and H. L. Brookes: Shelving.

384,503.—A. P. Lewis and Sons, Ltd., and B. B. Lewis: Fixing bricks or blocks.

384,538.—T. Goldschmidt Akt.-Ges.: Process of manufacturing glazes or enamels.

384,551.—National Pneumatic Co.: Safety door-edge.

384,552.—National Pneumatic Co.: Fluid-pressure engines for operating and controlling doors.

384,566.—G. Jaeger: Concrete-mixing machines.

384,579.—British Thomson-Houston Co., Ltd.: Humidity-responsive apparatus.

384,582.—Merryweather and Sons, Ltd., J. H. Osborne, and A. W. Burford: Winding-gears for raising and lowering fire curtains.

384,589.—J. C. A. M. de Bie: Automatic cutting-machines for brickyards.

Note.—Period for opposition expires February 14.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. Painters, by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/5; Grade C, 1/4; Aberdeen has a special rate of 1/5½. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1½	1/0½	1/0½	1/-	/11½	/11½

Aberdeen	A	Dundee	A	Hawick	A²	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A
Alexandria	A	Duncon	A	Inverness	B	Peterhead	A
Arbroath	A²	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A²	Rothesay	A
Bathgate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A²
Bo'ness	A	Forfarshire	A²	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A	Selkirkshire	A
Clackmannanshire	A	Galashiels	A²	Leith	A	Stirling	A
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A²
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A²	Hamilton	A	Peeblesshire	A²	Wishaw	A
Dumfriesshire	A²						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 147.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	9
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundations 1 to 6	per yard cube	24	3
Add if in underpinning in short lengths	" "	5	6
Add if in floors 6 in. thick	" "	2	3
Add if in beams	" "	2	9
Add if aggregate 1 : 2 : 4	" "	9	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	27	0	0
Add if in stocks	"	7	0	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	0	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, etc., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	9
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	18	9
Chilmark stone fixed complete	" "	17	6

SLATER.

		s.	d.
Welsh 16in. × 8 in. 3 in. lap. including nails	per square	72	9
Do. 20 in × 10 in. Do. Do.	"	80	9
Do. 24in. × 12in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	4	0
Do. joists	" "	4	6
Do. roofs, floors and partitions	" "	5	0
Do. trusses	" "	7	3

		¾″	1″	1¼″	2″
Deal rough close boarding	per sq.	30/–	35/–	43/–	70/–

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	9
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾″	1″	1¼″	1½″
Deal-edges shot	per sq.	—	38/–	45/–	52/–
Do. tongued and grooved	"	—	43/–	50/–	58/–
Do. matchings	"	40/–	45/–	—	—
Moulded skirtings, including backings and grounds	per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size		3	6

DOORS.

		1½″	1¾″	2″
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	"	2/4	2/6	2/9
Two-panel moulded both sides	"	2/6	2/9	2/11
Four-panel Do. Do.	"	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	6

		1″	1¼″	1½″
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/2	1/4	1/7
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

		1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/–	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1¼ in.	per ft. run	0	9
Mahogany handrail, average 3 in. x 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/–
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/–
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	"	18	0
Do. stanchions	"	20	9
In roofwork	"	26	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/–	1/1	1/3	1/6
Ogee Do. Do.	"	1/2	1/3	1/9	2/3
Rain-water pipes with ears	"	1/3	1/10	—	—
Extra for shoes and bends	each	2/9	3/11	—	—
Do. stopped ends	"	1/1	1/4	1/9	2/6
Do. nozzles for inlets	"	2/2	2/7	3/7	4/–

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	38	0
Do. do. flats	"	37	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½″	¾″	1″	1½″	2″	4″
Drawn lead waste perft. run		11½	1/4	1/6½	2/5	2/8	—
Do. service	"	1/3	1/9	2/–	3/–	—	—
Do. soil	"	—	—	—	—	—	5/9
Bends in lead pipe	each	—	—	—	—	2/6	6/–
Soldered stop ends	"	0/9	1/1	1/6	2/3	2/10	—
Red lead joints	"	0/10	0/11	1/2	1/9	2/1	4/3
Wiped soldered joints	"	2/3	2/9	3/0	3/10	4/10	6/9
Lead traps and cleaning screws	"	—	—	—	10/6	14/–	—
Bib cocks and joints	"	6/4	9/7	14/–	—	—	—
Stop cocks and joints	"	12/4	14/2	20/8	54/–	—	—

PLASTERER.

			s.	d.
Render, float and set in lime and hair	per yard sup.		2	0
Do. Do. Sirapite	" "		2	3
Do. Do. Keen's	" "		3	0
Add saw lathing	" "		1	4
Add metal lathing	" "		2	4
(Not including hangers or runners, etc., for suspended ceilings.)				
Portland cement screed	" "		2	2
Do. plain face	" "		3	3
Mouldings in plaster	per 1 girth		0	1
One-and-a-half granolithic pavings	per yard sup.		5	3½

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	6¼
26-oz. Do.	" "	0	7½
Obscured sheet	" "	0	8
¼-in. rolled plate	"	0	9
¼-in. rough rolled or cast plate	" "	0	10
¼-in. wired cast plate	" "	1	1

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece 2/– to 4/–		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

Change of Address.

Messrs. C. and F. Bryen, builders and decorators, have moved to 48, The Broadway, Crouch End, N.8. Telephone: Mountview 6116.

Messrs. Everseal Products, Ltd., announce that their address has been changed to No. 2, Victoria-colonnade, as from January 14, instead of No. 12.

Egyptian Lift Contract for British Firm.

The Egyptian State Railways, Telegraphs and Telephones has placed with Messrs. Marryat & Scott a large order for lifts for Tanta Station, Egypt. The contract has been pending for some time, and there was considerable competition from Continental and American firms.

Hotel and Restaurant Lighting.

We have received a copy of a new G.E.C. brochure, giving examples of the lighting of various hotels and restaurants, together with other suitable electrical equipment for the hotel industry. This publication is of particular interest just now in view of the activities of the British Electrical Development Association and the special campaign in which they are engaged for improving the lighting of hotels and restaurants, so many of which are hopelessly out of date in regard to their methods of illumination. The brochure, well illustrated, is obtainable from Magnet House, Kingsway, W.C.2.

Heating and Ventilating.

The latest of the excellent series of publications which Sturtevant Engineering Co., Ltd., issue deals with "Heating, Ventilating and Air Conditioning" in a manner which the architect should appreciate. A brief consideration of general conditions is followed by a description of the "Sturtevant" system of heating, ventilating and air conditioning, fully illustrated by photograph and diagram. This system has been installed in many theatres, restaurants, hotels, banks, cinemas, etc., and architects engaged in that class of work may obtain a copy (Publication 1,128) from the company at 147, Queen Victoria-street, E.C.4.

New Grid Contract: 6,000 Tons of Steelwork for Swansea.

The Swansea Borough Council has placed with Messrs. Braithwaite and Co. (Engineers), Ltd., of Westminster, West Bromwich and Newport, a contract for the supply and erection of over 6,000 tons of structural steelwork for its new large power station. The work, which will be completed within twelve months, will provide employment for about 1,000 men for that period. The Braithwaite organisation has recently completed the Willingdon Bridge over the River Hooghly at Calcutta, and is now constructing the Irrawaddy Bridge, near Mandalay, Burma.

Rubber Staircases in the Prudential Building.

Two of the three staircases in the section of the Prudential Company's building in Holborn which is being built, are to be covered with rubber. These staircases are made of special steel casings which are filled with cement, and rubber treads are being specially moulded in one piece—tread, nosing and riser—conforming to the exact profile of the stairs. There is approximately an area of 5,000 sq. ft. of treads, nosings and risers, and 1,250 sq. yds. of landings to be covered. This work has been entrusted to the Dunlop Rubber Co., Ltd., by Messrs. Trollope and Colls, Ltd., of 5, Coleman-street, E.C. The architects are Messrs. Joseph, of 2, Paul's Bakehouse Court, E.C.

New Cinema, Worthing.

The Kleine Company, Ltd., of New Oxford House, Hart-street, Bloomsbury, W.C.1, have secured the contract for the erection of their Kleine patent reinforced hollow brick floors, flat roofs, balcony steppings and staircases at the new cinema at Rowlands-road, Worthing. The cinema, which also includes a number of shops is being built for Messrs. Kay Bros., of 167, Oxford-street, W.1, who have been associated with cinematograph entertainment since its inception, and the design is in the hands of Mr. H. Weston, M.I.Struct.E., F.I.A.S., the architect, of 6, Finsbury-square, E.C.2. Work will commence on the site almost immediately, and it is anticipated that the cinema, which will have a seating capacity of 2,000, will be opened early in June.

Midland Bank, Ltd.

The directors of the Midland Bank, Ltd., report that, after making an appropriation towards bad and doubtful debts (all of which have been fully provided for), the net profits for the year 1932 amount to £2,019,142, which, with £850,016 brought forward, makes £2,869,158, out of which the following appropriations amounting to £1,154,880 have been made:—To interim dividend, paid July 15, 1932, for the half-year ended June 30, 1932, at the rate of 16 per cent. per annum, less income-tax, £854,880; to reserve for future contingencies, £300,000; leaving a sum of £1,714,278, from which the directors recommend a dividend, payable February 1 next for the half-year ended December 31, 1932, at the rate of 16 per cent. per annum, less income-tax, £854,880; and a balance to be carried forward of £859,398.

British Firm Gains a Russian Order.

A notable success has been gained by Messrs. Benham and Sons, Ltd., of Wigmore-street, in securing the order for the cafeteria equipment of the Sharikoposhipnick Works in Moscow, said to be the largest ball-bearing factory in the world. This will be the first equipment of its kind fitted up in Russia, the scheme and specification being drawn up by a consulting engineer from Chicago. Originally only three of the leading American firms were asked to quote, and it was an inspection of the staff equipment of Messrs. Harrods which decided that one British firm, Messrs. Benham and Sons, Ltd., should be included in the competition, in which they have been successful in obtaining the contract. This includes steam-heated and electrically-heated service fittings, carving tables, and bain-maries, cold counters. Benham's pressure water boilers for tea-making, tea and coffee urns, dishwashing and stacking tables, gravity and motor-driven conveyers and a large steam-heated cabinet hot closet. The tops of all hot counters will be constructed of "Staybrite" stainless steel, and a good many novel features have been adopted in the construction of the fittings.

A Staff Gathering.

An enjoyable evening was spent recently by the staff and employees of Messrs. A. Edmonds & Co., Ltd., shopfitters of Birmingham and London, at their annual meeting and dinner. The loyal toast of "The King" was duly honoured, and that of "Messrs. A. Edmonds & Co.," submitted by Mr. C. T. O. Lloyd, and seconded by Mr. F. Drew, was responded to by the managing director, Mr. A. Edmonds. He stated it was encouraging to report that the employees' shares scheme would benefit by the dividend which was being paid as the result of a successful year's trading in face of great difficulties. The employees were thanked for their loyal support and co-operation, and prizes were given to two employees who had recently completed their apprenticeships. It was announced that nineteen apprentices in drawing office, wood-working shops and mill, glass embossing and metal departments, had at the recent half-year's examination, won additional merit stars to their badges. Mr. Edmonds stated that contracts had been placed for the extension of the factory to approximately double its present size, and that the company would thus be able to give its clients still better service. The latter part of the evening was occupied by entertainment, whist and ping-pong parties and dancing. Mrs. A. Edmonds distributed the prizes. A very happy evening was brought to a close by the singing of Auld Lang Syne.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Accrington.—18 houses for aged persons on Laneside estate, for the Council:—
*Blakeley & Son, of Barnoldswick ... £4,050

Ashbourne.—Additions to warehouse, for Messrs Frank Wright, Ltd.:—
*Tyler & Coates, Ashbourne.

Ashton-under-Lyne.—Additions to St. Anne's schools, Burlington-street, for the Catholic Authorities. Messrs. Byrom & Noble, AA.R.I.B.A., architects, 9, Victoria-buildings, Silver-street, Bury:—
*Thomas Warrington, Hyde, Ches.

Auchterarder.—Houses in Rossie-place, for the Corporation. Messrs. Stewart & Paterson, architects, 16, Blythswood-square, Glasgow:—
Excavation, brick and mason—
*W. G. Gordon, Auchterarder £1,543
Joinery, carpentry and ironmongery—
*Crerar & Allan, Wrights, Tullibardine... 920
Slater—
*P. White & Jamieston, Auchterarder 526
Plaster—
*McLarne & Sons, Auchterarder 264

Barrow-in-Furness.—Central child welfare centre and dental clinic in Abbey-road, for the T.C. Mr. W. C. Persey, Borough Engineer and Surveyor:—
*J. Turner, Barrow-in-Furness £5,694

Barry.—102 houses at the Buttrills estate, for the Council:—
*Direct Labour £36,967

Beigh'on.—Eight dwellings for aged persons in the parish of Beighton, for the Chesterfield R.D.C. Mr. F. W. Broom, clerk:—
*Wm. Drabble & Sons, Mosborough, near Sheffield £1,540

Belfast.—Improvements and additions to Strand public elementary school, for the E.C.:—
*W. Logan & Sons, Belfast.

Birmingham.—Library and office buildings, for the Birmingham Law Society, Wellington-passage, Bennett's Hill. Messrs. Bateman, F.R.I.B.A., architects, 19, Bennett's Hill:—
*R. Fenwick, Ltd., Birmingham.

Blackpool.—Private hotel and boarding-house on the Promenade, Cleveleys. Mr. R. H. Cunliffe, F.R.I.B.A., architect, "Wycollar," Rossall-road, Cleveleys:—
Builders—*Hawthorne & W. H. Bloor, Ltd., Blackpool.
Terra cotta—*Leeds Fireclay Co., Ltd., Cliff Works, Leeds.

Bootle.—Electrical work at Linacre Hospital extensions, for the Board of Management:—
*McGoff & Vickers, Liverpool £243

Bursiem.—Reconstruction of offices, for the Burslem and District Industrial Co-operative Society, Ltd., Newcastle-street. Messrs. Watkin & Maddox, F. & L.R.I.B.A., architects, National Provincial Bank-chambers:—
*J. Micklejohn & Sons, Stoke-on-Trent.

Bury.—Lavatory accommodation for females at Jericho Institution, for the Rochdale and Bury Guardians Committee. Mr. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston:—
*J. Greenwood, Ltd., Bury £250

Cannock.—Rebuilding offices in Stafford-road, for the National Provincial Bank, Ltd., 15, Bishopsgate, London, E.C.2. Mr. F. C. R. Palmer, F.R.I.B.A., resident architect, Bank's Head Office:—
*C. Bryant & Son, Ltd., Birmingham.

Chesterfield.—Bazaar premises at Knifesmithgate, for Messrs. Marks & Spencer, Ltd., 72 to 80, Baker-street, London, W.1. Messrs. Norman Jones & Rigby, F.R.I.B.A., architects, Williams Deacons' Bank-buildings, Lord-street, Southport:—
*Bovis, Ltd., London, W.1.

Clones.—118 artisans' dwellings, for the U.D.C. Mr. Frank Gibney architect, Dublin:—
*T. Kennedy, Galway £40,932

Corby.—For (a) research block, (b) additions to existing offices, for Messrs. Stewarts & Lloyds, Ltd., 41, Oswald-street, Glasgow. Messrs. R. J. Williams & Partner, architects, Market-street, Kettering:—
*O. P. Drever & Sons, Ltd., Kettering.
Reinforced concrete work—*British Reinforced Concrete Engineering Co., Ltd., Stafford.
*J. Streather & Son, Corby.

Darlington.—68 houses in Hundens-lane, for the T.C.:—
*Cox & Gibson, 122, Victoria-road, Darlington.

Doncaster.—Pithead baths at Hatfield Main Colliery, for the Miners' Welfare Committee. Mr. J. H. Forshaw, architect to the committee, Dean Stanley-street, S.W.1:—
*T. Jenkinson & Sons (Doncaster), Ltd., Doncaster.

Dorchester. — 24 three-bedroomed non-parlour houses in blocks of four at Victoria-park, for the T.C. Mr. H. D. Strange, Borough Surveyor, 21, North-square:—
*F. Box, Nesta, Columbia-road, Ensbury, Bournemouth £6,744

Dover.—Conversion of Nos. 7-10, Waterloo-crescent, into self-contained flats. Mr. F. G. Hayward, architect and surveyor, Market-square, Dover:—

T. Francis & Son	£7,367
G. H. Denne & Son	7,211
Hayward & Paramor	7,130
G. Lewis & Sons (Dover), Ltd	6,734
O. Marx	6,615
Geo. Browning	6,295
*J. J. Clayton & Son	6,132

Ealing.—Park superintendent's house at Brent Lodge-park, for the T.C.:—

H. Kerswell	£999
Tucker & Warren	925
J. W. Haunton	900
O. J. Charlton & Sons	850
The London Construction Co.	808
Geo. F. Taylor	805
Saunders & Gardner	795
T. Millman, Ltd.	738
*Evan Thomas & Sons	700

Eden.—Pavilion for the local miners' welfare committee. Mr. E. Graham, architect, Miners' welfare supervisor, Coal Trade Offices, Newcastle:—
*E. Rutter & Co., Ltd., Esh Winning.

Exmouth.—Shelter and lavatory on the Exmouth miniature golf course, for the U.D.C.:—
*F. W. Davey £220

Filey.—Alterations and additions at Ravine Lodge, for the U.D.C.:—
*T. Cowling £109 11

Glasgow.—Electrical installation for two housing schemes, for the T.C. Mr. William McNab, Housing Architect:—
Cumlodden-drive housing scheme—
*Darrach & Elspin, 37, Weir-street, Glasgow £448 4 8½
Tollcross housing schemes—
*A. A. Moore, 88, Castle-street, Townhead, Glasgow 130 0 5

Glasgow.—Painter work and iron railings and gates, for 1,105 houses at East Keppoch, for the T.C. Mr. William McNab, housing architect:—
Painter—
*A. & G. Laird, 105, Renfrew-street, Garnethill, Glasgow £4,318 0 4½
Iron railings and gates—
*J. Robertson & Co. (Glasgow), Ltd., Coghill Iron Works, Keppochhill, Glasgow 4,752 3 4

Goole.—Conveniences and boundary wall at Alexandra-street Council school, for the West Riding C.C. Mr. H. Wormald, A.R.I.B.A., County Architect, County Hall, Wakefield:—
*A. Roberts, Reedness.

Hinckley.—Eight houses at Stoney Stanton, for the R.D.C.:—
*T. G. Lee £2,422

Hinckley.—60 houses on the Middlefield-lane estate, for the U.D.C. Mr. J. S. Featherston, engineer:—

Bates & Son, Coventry	£17,370
T. Barker & Sons, Loughborough	17,220
Simms, Sons & Cooke, Nottingham	16,788
Whittle, Ltd., Arnold	16,500
Greaves Bros., Hinckley	16,500
Building and Public Works Construction Co., Swindon	16,486
H. Fiddler & Sons, Luton	16,200
Harris Bros., Marehay, Derby	15,243
T. G. Lee, Stoke Golding, Nuneaton	15,233
Johnson & Newton, Coventry	15,074
F. Garner & Sons, Leicester	15,000
*Hobson & Sons, Newark-street Works, Nottingham	14,430

Huddersfield.—Methodist Church and school buildings in Thornton Lodge-road. Mr. W. A. Kellett, L.R.I.B.A., architect, 8, Lendal, York:—
*Graham & Jessop, Ltd., Moldgreen, Huddersfield.

Huntingdon.—Reconstruction of the two cottages in Princes-street, for the T.C.:—

C. Allen, Huntingdon	£365
Pettits, Ltd., Godmanchester	329
V. Vinnell, Huntingdon	303
M. J. Allen & Sons, Ltd., Brampton	295
H. Headley & Son, Bluntisham	249
F. W. Bellamy, St. Neots	207
*A. Peacock & Son, Huntingdon	190

King's Lynn.—Canning factory on a site of 10 acres at West Lynn, for the Lincolnshire Canners, Ltd., Skirbeck Quarter, Boston. Messrs. Carnell & White, F. & L.R.I.B.A., architects, Paradise-chambers:—
Builder—*R. W. Dye, King's Lynn.
Steelwork—*Archibald D. Dawnay & Sons, Ltd., Norwich.

Kirbymoorside.—10 houses for the R.D.C.:—
*L. T. Oldfield, Castlegate, Malton.

Leeds.—Adaptation of the old police station buildings into extensions to the adjoining branch library at Woodhouse Moor, for the Corporation:—
*E. Ellis.

Liverpool.—Alterations to premises, 51, Denison-st., for Messrs. Threlfall's Brewery Co., Ltd., 21, Trueman-street. Messrs. Medcalf & Medcalf, FF.R.I.B.A., architects, 3, Stanley-street:—
*Hollinghurst & Power, Liverpool.

¶London.—Tenders accepted by H.M.O.W. for the week ended January 14:—
Belfast, New Law Courts—decorations—G. Morrow & Son, Ltd., Hanover House, Clifton-street, Belfast.
Dollis Hill Research Station—rubber flooring—North British Rubber Co., Ltd., 200, Tottenham Court-road, W.1.
Palace of Holyrood stable buildings—glass roof over portions of courtyard—Fleming Bros., 65, Bath-street, Glasgow.
Gloucester Head Post Office—erection—E. Crowder, South-road, Handsworth, Birmingham.

¶London.—The following works contracts have been placed by the War Office during the week ended January 12:—
Farnborough—barrack blocks and regimental institute—T. H. Jones, Farnborough.
Melton Mowbray—erection of loose boxes—F. D. Goodwin, Melton Mowbray.
Aldershot—repairs to stable paving—E. J. Logan, London, W.C.2.
Aldershot—periodical services—A. A. McDermott & Sons, Ltd., Bradford.
Longmoor—conversion of forage barn to store—Enticknap Bros., Godalming.
Dunblane—repairs to parade ground—Darrock, Newell & Co., Ltd., Glasgow.
Netley and Southampton—periodical services—Fields, Ltd., Nottingham.
Chatham—cookhouse and dining accommodation—J. W. Leech & Son, Ltd., Rochester.

Maidenhead.—Reconstruction of premises in King-street, for the National Provincial Bank, Ltd. Mr. F. C. R. Palmer, architect to the bank:—
*Turnbull & Son, 9, Northumberland-alley, Fenchurch-street, London, E.C.3.

Manchester.—176 houses in Parrs Wood-road South, Broughville-drive and Mellington-avenue, Didsbury:—
*J. T. Scott, Manchester.

Manchester.—Foundations to the large extensions in Spring-gardens, Fountain-street, Marble-street and Phœnix-street, for the District Bank, Ltd., 15, Spring-gardens. Messrs. Francis Jones & H. A. Dalrymple, F. & A.R.I.B.A., architects, 178, Oxford-road:—
*Fram Reinforced Concrete Co., Ltd., Manchester.

Mansfield.—Extensions to the Harlow Wood Orthopædic Hospital, near Mansfield, for the Governors. Messrs. Bromley, Cartwright & Waumsley, architects, Prudential-buildings, Nottingham:—
*T. Long & Sons, Nottingham.
(Estimated cost £14,000.)

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Newcastle.—New factory in Crow Tree-terrace, for Messrs. H. Binns, Sons & Co., Ltd.:—
*Stafford & Sons, Sunderland.
Steelwork—*Redpath Brown, Edinburgh.

Newcastle-on-Tyne.—Alterations and new frontages to the premises of Messrs. Style & Mantle, Ltd., Northumberland-street:—
*Davies & Co., London.

Newcastle-on-Tyne.—Extensions and alterations to the Eye Infirmary, St. Mary's-place. Messrs. Newcombe & Newcombe, architects, Eldon-square:—
*S. Miller, Ltd., 17, North-street, Newcastle.

Newtownards.—Improvements to the town hall, construction of emergency staircase and erection of public conveniences, for the U.D.C.:—
*Smyth & Son, Newtownards £770

Northamptonshire.—Reconstruction of bridge over the canal on the Kilsby-road, for the C.C. Mr. E. A. Black, County Surveyor, County Hall, Northampton:—
*Aubrey Watson, Ltd., London, S.W.1 £3,540

Oldham.—Painting the interior of the Hollinwood Works Depot, for the Corporation. Mr. J. F. Richards, General Manager and Engineer, Wallshaw Depot:—
*T. Jackson, Oldham.

Ormskirk.—External painting and interior decoration of the institution, for the Lancashire County P.A.C. Mr. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston:—
*T. Ball, Ormskirk £685 10

Pontefract.—Detached house at Knottingley. Messrs. Pennington, Hustler & Taylor, F. & L.R.I.B.A., architects, 45, Ropergate:—
Builder—*C. H. I. Bramham, Brotherton, near Ferrybridge.
Joiners—*Poskitt & Smith, Ltd., Airedale.
Slaters—*Stewart Bros. & Son.
Plumbers—*Cockroft & Briggs.
Plasterers—*T. W. Senior & Sons.
Painters—*T. Burton & Sons.
(Remainder of Pontefract.)

Portsmouth.—150 houses on Southampton-road site, Cosham, for the T.C. Mr. R. J. Jenkins, City Engineer:—
*Wm. C. Mitchell, 40, Sandringham-road, Portsmouth £44,436

Portsmouth.—Mild-steel fencing and gates at Langstone Hospital, for the Corporation. City Engineer:—
*Dobbing & Co., Ltd., South Dock Ironworks, Extension-road, Sunderland £731 15

Preston.—Extensions to the bakery, for Messrs. Harrison's Confectioners, 34, Watling Street-road. Mr. Fred Howorth, L.R.I.B.A., architect, 10, Theatre-street:—
*T. Croft & Sons, Ltd., Preston.

Preston.—Buildings in Corporation-street, for Messrs. J. Sykes & Son, potato merchants, 40, Lune-street. Mr. F. Howorth, L.R.I.B.A., architect, 10, Theatre-street:—
Bricklayer—*W. Jackson & Sons.
Carpenter—*J. C. Barnes & Son, Ltd.
Plumber, glazier, painter—*C. Helme.
Plasterer—*Wallbank & Simpson.
Slater—*W. & T. Conway.
Mason—*J. E. Ratcliffe.
Electrician—*Mayor & Crozier.
(All of Preston.)

Ramsgate.—Structural alterations and staybright steel shopfronts at 3 and 5, King-street:—
*Pike & Pettengell, 111, Hardres-street, Ramsgate.

Rotherham.—Bazaar premises in College-street, for Messrs. Marks & Spencer, Ltd., Michael House, 72-80, Baker-street, London, W.1. Messrs. Norman Jones & Rigby, architects, Williams Deacons' Bank-chambers, Lord-street, Southport:—
*Bovis, Ltd., London, W.

Rothwell.—Alterations and additions at the "Black Bull" hotel, for Messrs. J. Tetley & Sons, Ltd., The Brewery, Leeds:—
*Furness & Render.

Sheffield.—190 non-parlour type houses on the Woodthorpe estate, for the T.C. Mr. W. Geo. Davies, F.R.I.B.A., City Architect:—
*Melling Bros., Ltd., Balfour-road, Sheffield.

Shirley.—Shopfront at 284, Stratford-road, for Mr. R. O. Suffield:—
*A. Edmonds & Co., Ltd., Birmingham.

Shrewsbury.—Carrying out parts of the works under the new river scheme, for the Corporation:—
*Harland Engineering Co., Ltd., Alloa £10,500

Sligo.—52 houses at Slieveragh, for the Corporation:—

Francis Pryor, Ballinamore	£20,680 12
P. J. Murphy, Athlone	19,758 5
J. Molloy & Sons, Ballina	18,366 0
*Kilcawley, Maloney & Taylor, Ballisodare	15,163 10
Owen Larkin, Ballinasloe	15,056 16

Smethwick.—Conversion of buildings at Uplands school into shower baths, for the T.C. Mr. Roland Fletcher, Borough Surveyor:—

*B. Fenwick, Ltd., Birmingham £309

South Shields.—Converting of house properties in Eldon-street into up-to-date licensed premises, for Messrs. James Deuchar, Newcastle. Messrs. J. H. Morton & Son, architects, Martin's Bank-chambers:—

*G. Bailey, Ltd., King-street, South Shields.

Stanely.—Demolition and erection of 8 cottages at Railway-terrace. Messrs. I. Evans & Son, land and estate agents, 15, Egerton-street, Wrexham:—

*E. W. Giffins & Sons, Aberdarfyn.

Stourport.—80 houses on Tan-lane, for the U.D.C. Mr. L. H. Poole, surveyor:—

*M. Wilesmith & Son, Malvern £279 per house

Sunbury-on-Thames.—Six houses in Windmill-road, for the U.D.C.:—

A. W. Stokes, Hampton	£2,250
J. W. Jones, Weybridge	2,209
Novis (Builders), Ltd., London	2,175
A. E. Brown, West Ealing	2,154
F. Hartfree, New Malden	2,154
W. A. Harding, Ltd., Guildford	2,097
Folsham, Ltd., Richmond	1,932
The Building & Public Works Construction Co., Ltd., Swindon	1,779
W. H. Connel, Brentwood	1,799
*A. W. Sheppard, Shepperton Green	1,602

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Stratford-on-Avon.—Conversion of the remains of the old Stratford Memorial Theatre into a conference hall. Messrs. Scott, Chesterton & Shepherd, architects, Holly Studio Mount, London, N.W.3:—

*G. E. Wallis & Son, Ltd., Maidstone.

Sunderland.—Painting tenders, for the T.C.:—

Painting Villiers-street junior technical school; Cowan-terrace council school; Chester-road council school and caretaker's house; Hylton-road council school and caretaker's house—*Borough Engineer.

Exterior painting at Simpson-street Council school and caretaker's house, Stansfield-street Council school and caretaker's house; and A. P. Thompson Hutchison's buildings, Mowbray-road—*R. J. Weetman & Sons.

Swansea.—Conversion of the Parochial School into rooms for instruction in handicraft and domestic subjects, for the C.B.:—

*J. Harris, Trebocth, Swansea ... £857 8 7

Swansea.—Steelwork for structural work at the new electricity station at Tir John North, for the C.B.:—

*Braithwaite & Co., Engineers, Ltd. £151,708 18 1

(In lieu of previous tender.)

Swinton and Pendlebury.—Additional 70 houses on housing estate, for the U.D.C. Mr. Henry Entwisle, surveyor:—

*Direct Labour.

Tunstall.—Presbytery, for the Rev. P. J. Ryan, of Sun-street, Tunstall. Messrs. Cotton & Hulme, architects, Piccadilly:—

*Direct Labour.

Wallsend-on-Tyne.—Alterations to the front of the "Davy" public house, for Messrs. Ind, Coope, Ltd., brewers, Newcastle:—

*E. A. Bramley, Sun Works, Manor Chare, Newcastle

Warrington.—Parochial church hall in Lindley-avenue, Latchford, for the Rev. W. Greenwood, of Christ Church Vicarage:—

*Hallwoods, Ltd., Hyde, Ches.

Wheatley Hill.—Extensions and alterations to the branch premises at Wheatley Hill of the Sherburn Co-operative Society. Architect's Dept., 90, Westmoreland-road, Newcastle:—

*C.W.S. Building Dept., West Blandford-street, Newcastle.

Willington.—Two houses on the Dene housing estate, for the U.D.C.:—

*J. Thorns, Willington £480

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Worthing.—Additional nurses' bedrooms at the hospital. Mr. John Saxon Snell, F.R.I.B.A., chartered architect, Fairview, Durrington, Worthing. Quantities by Mr. A. Carden Pool, Ely-place, London, E.C.1:—

A. Parsons & Sons, Ltd., Hove	£1,993
G. W. Cook, Broadwater	1,800
Twine & Sons, Worthing	1,797
Rowland Bros., Horsham	1,796
G. Lynn & Sons, Brighton	1,787
Vincent C. Abell, Worthing	1,754
*F. Sandell & Sons, Worthing	1,746

Wrexham.—Installing heating, lighting and hot water systems at the new Public Assistance Institution at Wrexham, for the Denbigh Public Assistance Committee:—

*Norris Warming Co., Ltd., Manchester £3,800

Wiring, etc.—

*I. Hunter & Co., Liverpool 1,575

York.—Converting property into branch premises, for Messrs. R. Sinclair, Tobacco Co., Newcastle:—

*Biscombe & Frith, Lawrence-street, York.

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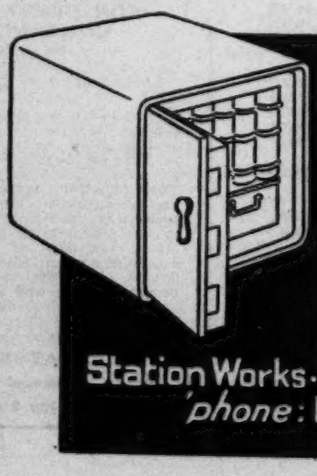
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